PROVINCIAL
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PLANTS AND THE BLACKFOOT

Natural History
Occasional Paper No. 4
1982

Alex Johnston

Alberta
CULTURE
Historical Resources

PLANTS AND THE BLACKFOOT

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Lethbridge, Alberta

Provincial Museum of Alberta

Natural History

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1982

Prepared for:

Provincial Museum of Alberta

Published by:

Alberta Culture

Historical Resources Division

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ACKNOWLEDGEMENTS

The Glenbow-Alberta Institute, Calgary, provided the Annora Brown and Gerald Tailfeathers illustrations used here. Drawings by A.C. Budd and K.F. Best were provided through the courtesy of the Agriculture Canada Research Branch, Ottawa, and the Agriculture Canada Research Station, Swift Current, Saskatchewan. Julie O. Hrapko, Curator of Botany, Provincial Museum of Alberta, Edmonton, Alberta, took a keen personal interest in this project and helped greatly in facilitating its publication. Colleen Conway typed the final manuscript.

The paper is based on an article entitled "Blackfoot Indian Utilization of the Flora of the Northwestern Great Plains", which appeared in the July-September issue of Economic Botany, Vol. 24, No. 3, pp. 301-324, 1970.

FOREWORD

This work is chiefly a review of literature on the relationship between Blackfoot peoples and plants. Some of the sources were very explicit in describing the use of plants by the Blackfoot, while other accounts were more vague. In some cases, the Blackfoot name of a plant has been recorded but the only documented use of the plant is by a neighboring tribe. However, these less precise records have been included also, as it is felt that due to the geographical proximity and economic ties between the Blackfoot and their neighbors, the Blackfoot likely had included this knowledge in their repertoire.

The reader is warned about the use of plants described herein, particularly the medicinal plants. We do not recommend self-treatment, as we do not have medical verification of the medicinal properties attributed to most of these plants. Similarly, we would stress caution in sampling the edible plants. There are plants in nature that can sicken or, in rare instances, kill. Being reasonably certain of the identity of a plant species before you try it is not enough, you must be positive!

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INTRODUCTION

The Blackfoot Indians occupied the northwestern plains along the eastern base of the Rocky Mountains. The climate and topography and, hence, vegetation of the region are diverse.

The Blackfoot Indians comprised three tribes: *Sik-si-kah'*, 'Blackfoot'; *Kai'nah*, 'Many Chiefs', now called Bloods; and *Pi-ku'ni*, 'Scabby Robes', now called Peigans. Together, the three tribes were known as *Sow-ki'tapi*, 'Prairie People'. White traders came into contact with the Blackfoot first and so this tribal name came to be used for the three groups.

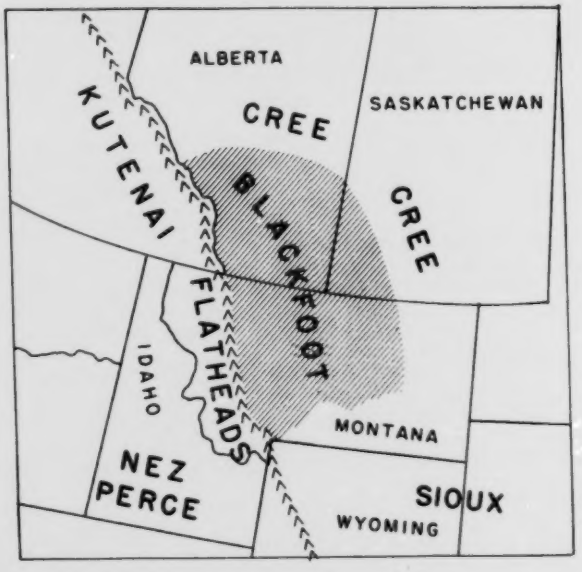


Fig. 1. Maximum area occupied by the Blackfoot during historic times.

The Blackfoot were nomadic hunters. Buffalo, *Bison bison bison*, were available for the killing; the hunting of these animals was not only work but also an exciting sport. Meat was *natapi waksin*, 'real food'; all other eatables were *kistapi waksin*, 'nothing foods' (Schultz, 1962).

Nevertheless, like other nonagricultural plains people, the Blackfoot consumed a considerable amount of vegetable food, usually mixed with meat. In their choice of such foods, the Blackfoot were consistent with

most of the nomadic tribes in the drainage basins of the Saskatchewan and Missouri Rivers. The use of camas, *Camassia quamash*, indicated contact with the plateau culture of the Flatheads and Nez Percé (Stubbs, 1966); the use of Indian breadroot, *Psoralea esculenta*, indicated contact with the plains culture of the Sioux. Wild rice, *Zizania aquatica*, was not within the experience of the Blackfoot. Nor was there evidence among them of the use of grains, although such use was common among the northern Shoshone (Wissler, 1910).

Vegetable foods were preserved by drying and were tied or strung in bundles for ease of transportation and storage. Infusions of roots or leaves of various plants were drunk as medicine, but no stimulating beverages of the character of tea or coffee were known (Hodge, 1913). Berries were crushed in a horn container, and the juice was consumed. The inner bark of various trees supplied nutritious food in the spring, often a time of great scarcity.

Plants were also used for other purposes, including the production of dyes and perfumes, the manufacture of weapons, as construction materials, and especially in medicinal practices.

Much time was spent on personal adornment, not only to increase attractiveness but also to identify the tribe or to mark some ceremonial occasion. Among the men, hairdressing was an important task, with brushes being made of the awns of speargrass, *Stipa spartea* (Gilmore, 1919), or bundles of root fibres of bush morning-glory, *Ipomoea leptophylla*, bound together with pitch and plant tissue to form a cylindrical mass (Forbis, 1957). Perfumes and oils were used and wisps of sweet grass, *Hierochloe odorata*, were hidden in the hair to add to the attractiveness of the person (Hodge, 1913). Various dyes of plant origin were used to decorate personal articles, while the seeds of certain plants were sewn on clothing or were made into necklaces.

The use of plant medicines was common and widespread. The Blackfoot owed much to contact with other tribes. In 1792, Peter Fidler wrote of a great camp near present-day High River, Alberta, where Cree and Blackfoot met to trade: "...the Cree are far from their own country but as they pretend to be great Doctors, and all the Blackfoot Indians believe it, they come here only to get what Skins they can from these Indians for leaves, roots, &c, of their own gathering." And later, "These men say

that a few tents of Kootenay Indians are at the *Naw-pew-ooch-a-tay-cots* (Oldman River, southern Alberta), wishing our Indians to visit them with Goods, to barter...." (MacGregor, 1966).

The use of plant medicines to doctor horses probably grew out of earlier experience in the use of plant medicines to doctor humans and possibly dogs (Ewers, 1955). There was a Blackfoot cult of specialists in the treatment of sick or injured horses although most owners were able to treat common ailments.

The term 'medicine' may require clarification. According to Catlin (1926), medicine meant mystery (in Blackfoot, *nahtoya*). The fur traders were mostly French to whom a doctor or physician was 'medecin'. The Indian country, Catlin went on to say, was full of doctors and, as they were all magicians, the word medicine habitually became applied to anything mysterious or unaccountable. The men who practiced 'medicine' were called 'medicine men' (in Blackfoot, *na-tose*).

Hodge (1913) defined medicine as an agent or influence employed to prevent, alleviate, or cure some pathological condition or its symptoms. The scope of such agents among the Indians was extensive, ranging from magic, prayer, force of suggestion, and other symbolic and empirical means to actual and rationally used remedies. Magic, song, prayer, exhortations, suggestions, ceremonies, the use of fetishes, and certain specifics were employed only by medicine men. Other remedies were known to a few additional people, usually older women. Still others were common knowledge among people of the tribe.

Cardinal (1969) described the role of the medicine man: "He was the doctor who healed with herbs or with the laying on of hands. He knew which roots to grind for the man with a cold; he knew which leaves made the best poultice for the man with a running sore; he knew which herbs, properly smoked, did the same work the Pill does today when an Indian family could not afford more children and which to give when natural fertility needed a jolt. For every disease he had a plant, a berry, a root, an herb; he was part doctor, part pharmacist, and certainly a great naturalist."

Plant parts used as medicine were the roots, leaves, bark, twigs, and rarely the flower or seeds. Plants were used fresh or dry, mostly in the form of a decoction. Up to one cupful was given once daily, and the

dose was rarely repeated. Generally only one plant species was used in the preparation of a medicine, although occasionally up to four or five might be employed (Hodge, 1913). A notable exception was love medicine (in Blackfoot, *ixtamakomimmotsiopi*, 'by-means-of-which-we-love-each-other'), commonly called 'Cree Medicine', in which 120 to 130 species of plants were powdered and mixed.

Blackfoot medicine, therefore, consisted of many medicines, some of which were purely of pharmaceutical use. Others combined the pharmaceutical or medicinal with the supernatural or magical, while still others were purely supernatural.

As late as 1914, a nursing sister at St. Paul's School, Blood Indian Reserve, recorded that the Indians did not care to enter the hospital as patients in those days for they had very little faith in the white doctors or their medicine. She went on to say that the old time Indians had their own medicine men and most of them could make medicines from herbs or roots.

An indication of the strength of traditional Blackfoot culture is seen in the fact that a few native doctors and medicine men still practice and treat illnesses with herbal remedies. Their ability to cure is thought to be secular in origin, learned from a relative or some other person. About one-third of the people interviewed in 1964 during a survey of the Blood Indian Reserve at Cardston, Alberta, had used herbal remedies (Lok, 1965).

Today, the native doctor merges into the role of medicine man, who is believed to have acquired power as a result of some sacred dream. The feeling among some present-day Blackfoot is that, while the powers of the medicine man may have been valid in times past, their powers are much weaker or nonexistent today (Lok, 1965). Among others, however, medicine men are accepted as having a great deal of power. They are often consulted in preference to, or as an adjunct to, modern medical doctors. The power of the medicine men is not advertised outside the native community, but it certainly exists.

Hellson and Gadd (1974) documented plant use as practiced among the Blood tribe. Their informants were elderly Indians who had been schooled in the tradition of plant uses. The authors described approximately 100 species under various headings, including religion and ceremony, birth control, medicines, horse medicines, diet, and crafts and folklore.

The Blackfoot Indians appear to have utilized or to have had knowledge of 185 species belonging to 145 genera of plants distributed among 57 families. The nomenclature of Moss (1959) has been used in the list of species that follows. The area covered is the northwestern Great Plains of North America, the historic homeland of the Blackfoot.

INFORMATION CONCERNING THE PLANTS

Division - THALLOPHYTA (Algae, Fungi, and Lichens)

Subdivision - ALGAE

Chlorophyceae (Green Algae)

The green scum of sloughs and lakes was used as a green stain (Grinnell, 1961). Species of algae included *Spirogyra* and *Cladophora*. Middleton (1952) stated that green was obtained from colored mud or from plants growing near lakes. The Blackfoot names *Kinaow-oghkee-kimino-was*, 'Blood Green-water Lake', and *Peigani-oghkee-kimino-was*, 'Peigan Green-water Lake', both located in or near Chin Coulee, Alberta, may have referred to algal growth in the water.

Subdivision - FUNGI

Class - Basidiomycetes

Agaricaceae

Marasmius oreades (Fairy Ring Mushroom)

Blackfoot: *Car-car-too-see* (Burkitt, n.d.), *Kok-a-tos-i-u* (Tims, 1889).

This edible mushroom is known as the fairy ring mushroom from its habit of growing in circles. The circles are common on grassland and increase in size from year to year. A fairy ring located on the Agriculture Canada Research Substation at Manyberries, Alberta, was about 1,000 feet in diameter in 1968 and was estimated to be about 700 years old. An Indian belief was that fairy rings had been caused in olden times by the dances of the buffalo, the larger circles by the old buffalo and the smaller circles by the buffalo calves (McClintock, 1910). When fire was struck with flint and steel, dried mushroom was sometimes used as tinder.

Polyporaceae

Polyporus spp. (Pore Fungus, Tube Fungus)

Blackfoot: *Apo-pik-a-tiss* (makes-your-hair-grey) (McClintock, 1910)

There are about 250 species in this genus, most of which occur on wood. Long ago, fire was obtained by means of fire sticks and was carried from place to place in a fire horn, a hollow, covered buffalo horn lined with moist, rotten wood. The horn contained a live coal on a dry piece of a fungus that grew on birch trees (hence the name 'touchwood') in what became known later as the Touchwood (in Blackfoot, *Pe'ko-ksix-im*) Hills on Beaver Creek, a tributary of the Saskatchewan (Groves, 1962). A small quantity of fungus was used as a purgative; too large a dose was reputed to turn the hair grey (McClintock, 1910). A fungus that grew on willow was chewed to relieve constriction of the throat. Grinnell said that a Blackfoot medicine was a yellow fungus that grew on pine trees. It was dried and powdered and administered either dry or in infusion as a purgative.

Polyporus tuberaster (Canadian Tuckahoe, Stone Fungus)

Canadian tuckahoe is a large black sclerotium, the resting stage of the fungus. Canadian tuckahoe is not edible, as soil and stones tend to be imbedded in it (Hrapko, 1973). The sclerotia are of a hard, rubbery texture when fresh but dry out to the hardness of the stone. They are often mistaken for fossilized pemmican (Vantenpool and MacRae, 1951). Called 'medicin de terre' or 'ground medicine' by the Cree, the sclerotia were used for poulticing and for rheumatism.

Lycoperdaceae

Lycoperdon spp. and *Geastrum* spp. (Puffballs)

Blackfoot: Fallen Stars; Dusty Stars; Star Balls.

All puffballs are edible when young, if white and homogenous inside, and are one of the safest groups of fungi to use as food according to modern texts (Groves, 1962). Indications are that the Blackfoot did not eat puffballs or other mushrooms. A necklace of pieces of fungus about the size of tennis balls, prized because of its delicate odor, was worn by some men (Wissler, 1910). Indian boys wore a bandolier of puffballs across their chests to ward off respiratory diseases (Dempsey, 1964). The soft central portion of dried immature puffballs was bound on wounds to stop bleeding and was held on the eye to remove foreign objects. The powdery interior of the ripe puffballs was used as a styptic on wounds

and was applied to the umbilicus of newborn babies (Gilmore, 1919). Spores were snuffed to stop nosebleed (Sparkling Eyes, 1965). Puffballs were used in decorating the tipi cover. A dark-colored band at the base of certain tipis represented earth; circular objects in or arising out of the dark-colored band were puffballs and represented life in or arising out of the earth. Blackfoot mythology tells how a young woman came to marry the Morning Star and to live with him in the sky. The couple had a son. Because she disobeyed her husband, the young woman and her son were banished to earth. But, when the sky-child touched the earth, he turned to a puffball known ever since as Star-balls. Still another legend, 'The Twin Brothers', contains these thoughts: "The punk which you use to make fires is made of bark and does not kindle quickly; take puff-balls instead, for they are much better. They are the Dusty Stars. You are to paint these stars around the bottom of the lodge...."

Subdivision - LICHENS

Usneaceae

Alectoria fremontii (Tree 'Moss')

A famine food in western Montana (Blankinship, 1905).

Evernia vulpina (Tree 'Moss', Tree Lichen, Wolf Lichen)

Blackfoot: *E-simatch-sis* (dye) (McClintock, 1910).

'Tree moss' is a lichen that is found on trees and old wood. In 1792, Peter Fidler wrote of the foothills of southwestern Alberta: "...on tops of the ridges a kind of firr, very old and stunted, with great quantities of a particular yellow moss adhering to the Trunks and Branches. This moss makes an excellent yellow dye for porcupine quills" (Fidler, n.d.). Alexander Henry (Coues, 1897) visited the region west of Rocky Mountain House and reported that ".....from some of the dry branches and stumps of the pines I collected a particular kind of bright yellow moss which is used by the women of this country for dying porcupine quills." The species was known to the Cheyenne as *he-ho-wa-ins'-tots* while the Gros Ventre dyed quills yellow with a solution from *Evernia vulpina*, called by them *otsahaa*.

Fig. 2. Tree lichen, *Evernia vulpina*.

Division - BRYOPHYTA

Subdivision - MUSCI (Mosses)

Blackfoot: *Oks'kis-sat'sis* (Tims, 1889).

Moss was used in child care. It was placed in the bottom of a bag (in Blackfoot, *sit'sim-at-sis*, 'moss bag'), the child was laid into it, and moss was placed between the child's legs. The women who were particular about keeping their children clean changed the moss several times a day; others did so no more than twice (Lamb, 1957). Maclean (1896) wrote, "When a child is born, soft moss is procured, and the babe is rolled up in it."

Division - PTERIDIOPHYTA (Ferns and Fern Allies)

Equisetaceae (Horsetail Family)

Equisetum arvense (Common or Field Horsetail)

Blackfoot: Jointed Water Grass (Ewers, 1955).

The traders considered horsetail, called by them 'small goosegrass' or 'prele', to be useful summer feed for horses. (The species is poisonous to horses in hay and is looked upon with suspicion at all stages of growth by modern agriculturists.) It was of little value during winter because by the time the horse had pawed through the snow the horsetail had broken into small bits and the horse could not pick it up (Coues, 1897).

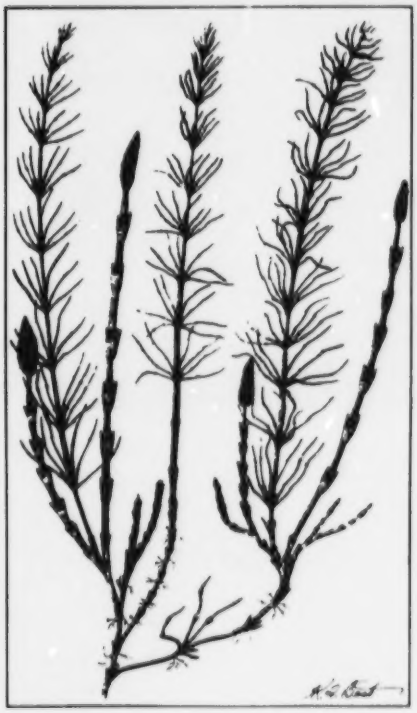


Fig. 3. Common horsetail, *Equisetum arvense*.

Equisetum hyemale (Scouring-rush)

Blackfoot: *Sa-po-tun-a-kio-toi-yis* (joint grass).

Scouring-rush was used like sandpaper to polish arrows and other wooden articles (Gilmore, 1919). The foliage was boiled in water and the liquid used in horse medicine as a drench (McClintock, 1910). A Cree medicine used to correct menstrual irregularities was made by boiling together scouring-rush and two unknown roots, *Weeakwew-atik*, a thin, reddish brown root, and *Kamstat-omik*, a thick, yellow-brown rhizome (probably *Acorus calamus*).

Lycopodiaceae (Club-Moss Family)

Lycopodium complanatum (Ground Cedar)

A decoction of ground cedar was used in the treatment of lung and

venereal diseases (Denny, 1957). The yellow spores of club-mosses have been applied as an antiseptic dust on wounds or snuffed for nosebleed (Leech, n.d.); the whole plant has been employed as a mordant to set certain dyes (Anonymous, 1968).

Division - SPERMATOPHYTA (Seed Plants)

Subdivision - GYMNOSPERMAE

Taxaceae (Yew Family)

Taxus brevifolia (Western Yew)

The wood was used for making bows (Blankinship, 1905).

Pinaceae (Pine Family)

Abies lasiocarpa (Subalpine Fir, Alpine Fir)

Blackfoot: *Katoya* (sweet pine) (McClintock, 1910); *Kytoyis* (sweet pine) (Schultz, 1962); *Kutoyisks* (sweet pine) (Middleton, 1952).

The Blackfoot called the Sweetgrass Hills of northern Montana *Katoysis* (Schultz, 1962) or *Kut-tu-yis-ix*, Sweet Pine Hills (McClintock, 1910).

The leaves were burned for incense at ceremonials, used in poultices for fevers and colds in the chest, mixed with grease for hairdressing, and used as perfume. The leaves from trees in dry places were said to have a sweeter and more concentrated odor than those from trees in wet places. The gummy secretion found in the blisters on the bark was used on wounds as an antiseptic and was taken internally for lung troubles (Blankinship, 1905). Tea made from the needles and resinous blisters was used as a remedy for colds (Murphy, 1959). Horse medicine bundles sometimes contained ground fir needles, probably *Abies lasiocarpa* (Ewers, 1955).

Juniperus communis (Ground Juniper)

Blackfoot: *Tsekie-sino-kosa* (Murphy, 1959).

A decoction of the berries was used to treat lung and venereal diseases (Denny, 1957).

Juniperus horizontalis (Creeping Juniper)

The seeds steeped in water were used for kidney troubles; the leaves and young twigs were used by the Crow in their ceremonials (Blankinship, 1905).

Fig. 4. Creeping juniper, *Juniperus horizontalis*.

Juniperus scopulorum (Rocky Mountain Juniper)

Blackfoot: *Siksi-noko* (McClintock, 1910); *Six-in-oko* (juniper) (Cat Face, 1963).

The berries were made into a tea to stop vomiting. The juniper was used in the Sun Dance ceremony, the summer festival of the Blackfoot. The aromatic twigs were burned for incense (Blankinship, 1905). A treatment for arthritis and rheumatism was: boil juniper leaves in water; add one-half teaspoonful turpentine at the boil; cool and rub mixture on the affected parts (Cat Face, 1963).

Picea spp. (Spruce)

Blackfoot: *Patokh'i* (spruce or pine trees) (Tims, 1889).

A small spruce cone was chewed by the Crees to relieve a sore throat, a use that was probably known to the Blackfoot.

Pinus albicaulis (White-bark Pine)

Blackfoot: *Paytoki* (pine trees) (Uhlenbeck and van Gulik, 1930); *Patokh'i* (spruce or pine trees) (Tims, 1889).

The Indians sometimes peeled off the outer bark and scraped off the inner bark or cambium as food (Blankinship, 1905).

Pinus contorta var. *latifolia* (Lodgepole Pine)

Blackfoot: *Mun'stam* (lodge pole) (Tims, 1889); *Manistami* (lodge pole) (Uhlenbeck and van Gulik, 1930).

The conical skin dwelling of the plains was known by the Siouan name tipi, from *'ti'*, to dwell, and *'pi'*, used for (in Blackfoot, *moyis*, 'lodge'). It consisted of a circular framework of poles brought together near the top and covered with dressed buffalo skins, sewn to form a single piece, and kept in place with wooden pins and pegs. The tipi frame was usually made of from 25 to 30 poles, averaging 25 feet in length, set in a circle about 15 feet in diameter (McClintock, 1910; Hodge, 1913).

The smaller trees, stripped of their bark, were used for lodge poles. The poles wore out quickly from being dragged over the prairie and, hence, were replaced every year (Denny, 1957). The lodge poles were cut in summer, when the camas was in flower, the Indians meeting and travelling to the mountains to lay in a supply (McClintock, 1910). The selected poles were slender, straight, and light. The species was practically the only tree in the region suitable for forming the framework of the tipi and also capable of easy transportation (Blankinship, 1905). Women selected and cut the poles, trimmed off the bark and branches, and dried them slowly in the sun. The resulting lodge poles were light, yet strong and easy to handle (Wissler, 1910).

Pinus ponderosa (Western Yellow Pine)

Twigs were employed as twirling sticks in fire-making; the inner bark was eaten in the spring. At Three Forks, Montana, in 1805, Lewis and Clark found pine trees stripped of their bark (Cutright, 1969). Sacagawea, an Indian woman with the party, said that it had been done to obtain the soft inner bark for food.

Pseudotsuga menziesii (Douglas-fir)

The leaves were used in the sweat bath as a cure for rheumatism. The spring buds were boiled, and the liquid was used in the treatment of venereal disease (Blankinship, 1905). Tyrrell (1916) indicated that the wood was used in the construction of bows, but modern foresters doubt this (Ogilvie, 1970).

Thuja plicata (Western Red Cedar)

The inner bark was eaten fresh or pressed into cakes for later use (Blankinship, 1905).

Subdivision - ANGIOSPERMAE (Flowering Plants)

Class - Monocotyledoneae (Monocotyledons)

Typhaceae (Cattail Family)

Typha latifolia (Common Cattail)

The down was used to make dressings for burns and scalds (Blankinship, 1905; Gilmore, 1919), and as padding for cradleboards (Murphy, 1959). Pads of cattail down were also used as diapers. The rootstocks are rich in starch and are edible.

Fig. 5. Common cattail, *Typha latifolia*.

Juncaginaceae (Arrow-grass Family)

Triglochin maritima (Arrow-grass)

According to Blankinship (1905), the seeds were parched and eaten. Foliage of the species has been shown to release cyanide, and it is a stock-poisoning plant of the rangelands (Lodge *et al.*, 1968).

Fig. 6. Arrow-grass, *Triglochin maritima.*

Fig. 7. Arrowhead, *Sagittaria cuneata.*

Alismaceae (Water-plantain Family)

Sagittaria cuneata (Arrowhead, Wapato)

The tubers of this aquatic species were loosened by the women with their feet and floated to the surface of the water (Blankinship, 1905). Tubers were eaten raw, although they contain a bitter juice, or were boiled.

Sagittaria latifolia (Arrowhead, Wapato)

Tubers were boiled or roasted (Gilmore, 1919). The women collected the tubers in shallow water by separating them from the roots with their toes. The roots were boiled or roasted in ashes and were used with meat (Murphy, 1959).

Gramineae (Grass Family)

The Blackfoot term for grass was *ma-yak* (Burkitt, n.d.), *ma-to-yees* (Palliser, 1863), or *mat-tu-yis* (Tims, 1889). The term for prairie was *sawki* (Schultz, 1962) or *saukye* (Uhlenbeck and van Gulik, 1930). They recognized the bunch grasses (*oh-soy-kotoyh-ko*, 'bunch grass'), the spear grasses (*okut-see*, 'spear grass'), and the slough grasses (*otsim-okoo*, 'green-wet') (Dempsey, 1964). Green grass was *ksisksimoko*, a term that also meant 'meadow'. The term for 'grassy lake' was *moyi-kimi* and for 'big grass marsh' was *o-mu-kutzi-mook* (Dawson and McConnell, 1884). A famous chief, Brings-down-the-Sun, once said: "I was born in the spring, during the moon when the grass is green (April). Grass is the head chief of everything. The animals depend on the grass for food and without the animals our children could not live" (McClintock, 1910). In the mid-1890's, the Blackfoot acquired the Grass Dance from the Assiniboins (Ewers, 1958); a description of the dance has been given by various authors including McClintock (1910). The area in the vicinity of Stirling, Alberta, was known as *O-muk-otsi-mokoyi*, 'big meadow grass', and that in the vicinity of Spring Coulee, Alberta, was called *Mokutoyi-skoyi*, 'where the grass grows' (Dempsey, 1969).

In the sign language of the plains Indians (Clark, 1885), the sign for grass was: hold hands with backs downward, arms extended to full length in front or to the right or left of the body but well below shoulder level, fingers and thumbs well separated, slightly curved and pointed upwards, the little finger of the right hand close to the little finger of the left hand, then separate hands a few inches.

Fig. 8. Beardy's warriors doing the Cree Grass Dance, 1885.

Bouteloua gracilis (Blue Grama)

The Indians used this grass to forecast the winter; if the culm had but one fruit spike, the winter would be mild; if two or more, the winter would be correspondingly severe (Blankinship, 1905).

Fig. 9. Blue grama, *Bouteloua gracilis*.

Buchloë dactyloides (Buffalo Grass)

The species was recognized as excellent fall and winter pasture for horses (Ewers, 1955).

Elymus cinereus (Giant Wild Rye)

Blackfoot: *Matoiopaists* (Uhlenbeck and van Gulik, 1930).

A prominent grass, often reaching a height of 6 to 8 feet, which was grazed mostly during the winter. When on war parties, the Blackfoot would sometimes make a lodge of sticks and would put in it ryegrass for beds (Uhlenbeck, 1911). A Blackfoot legend, 'Heavy Collar and the Ghost Woman', tells how Heavy Collar, hunting alone, crept into a patch of rye-grass to hide and sleep for the night. The previous summer, a woman had been murdered there and, the next day, her ghost followed Heavy Collar to his camp. The ghost left only after having caused the death of Heavy Collar's mother.

Hierochloë odorata (Sweet Grass)

Blackfoot: *Se-pat-semo* (McClintock, 1910), *Se-padzimo* (Murphy, 1959), *Siputsimo* (Schultz, 1962), *Sipatsimoi* (Uhlenbeck and van Gulik, 1930).

Fig. 10. Sweet grass, *Hierochloë odorata*.

Sweet grass was used as an incense or as a natural sachet. The lingering fragrance, which accounts for these uses, is due to coumarin. The leaves of the grass were preserved by drying and then plaiting several strands. Fillets of sweet grass were worn around the heads of the women (Tyrrell, 1916). Sweet grass was braided into the clothing or carried in small buckskin bags as a perfume. The grass was used in the Sun Dance ceremony and was

burned on a small altar found in many lodges. Leaves were soaked in water to make a hair wash. The grass was mixed with tobacco in ceremonial smoking (Gilmore, 1919). Smoke from burning sweet grass leaves was inhaled for colds. A bitter grass, likely sweet grass, was used in the healing of saddle sores (Ewers, 1955). Thompson observed that the plains Indians collected "sweet-scented grasses for giving to their horses to make them long winded on the chase" (Tyrrell, 1916).

Muhlenbergia richardsonis (Mat Muhly)

An informant told Ewers (1955) that the roots of a plant that grew around alkali lakes and of which horses were very fond (possibly the mat muhly) was a horse medicine.

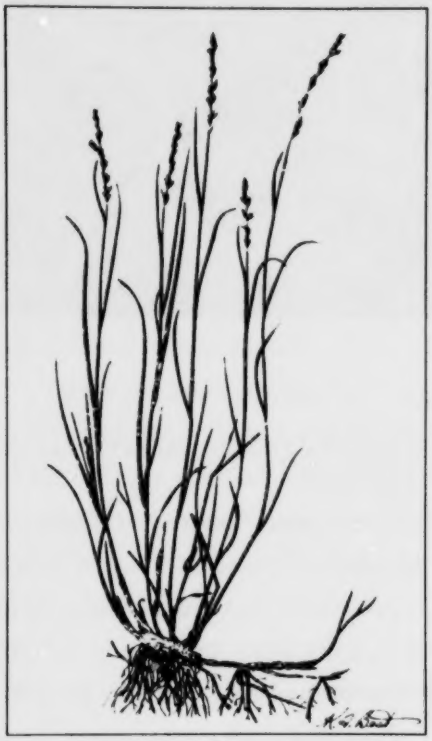


Fig. 11. Mat muhly, *Muhlenbergia richardsonis.*

Fig. 12. Indian rice grass, *Oryzopsis hymenoides.*

Oryzopsis hymenoides (Indian Rice Grass)

Writers stated that the large seeds of this species were gathered and used as food. However, there is little evidence that the Blackfoot

used the grains; grinding stones occur only rarely in the region in the foothills of the Bearpaw and Little Rocky Mountains, Montana (Wormington and Forbis, 1965).

Phragmites communis (Reed)

The hollow stems of this tall-growing grass were used for pipestems and arrowshafts (Blankinship, 1905). The whole plant was steeped in water, and the decoction was drunk as an emetic.

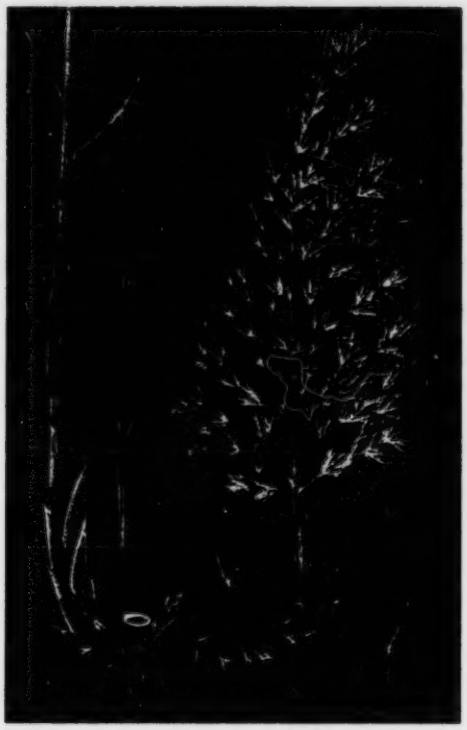


Fig. 13. Reed, *Phragmites communis*.

Stipa comata (Needle-and-thread or Spear Grass)

Blackfoot: *Okut-see* (spear grass).

The Blackfoot recognized that buffalo cows were prime and in the best condition for hunting in the fall when the spear grass was spread out (Ewers, 1955). Lewis and Clark recorded a common characteristic of

Fig. 14. Needle-and-thread or spear grass, *Stipa comata*.

needle-and-thread when they wrote: "These barbed seeds penetrate our mockersons and lether legings and give us great pain until they are removed" (Coues, 1893).

Stipa spartea (Porcupine Grass)

Blackfoot: *Okut-see* (spear grass).

The awns were bound into a cylindrical mass about the size of a man's thumb. This was used as a hair brush (Gilmore, 1919).

Zea mays (Corn, Maize)

Blackfoot: *Bes-ka'-ta.*

The Blackfoot name was derived from the Arapaho, the latter a farming tribe in former times. The Blackfoot did not cultivate corn.

Zizania aquatica (Wild Rice)

Wild rice was an important food plant elsewhere but does not appear to have been known to the Blackfoot. The species is not native to Alberta and Montana but has been introduced and has established locally.

Cyperaceae (Sedge Family)

Carex spp. (Sedges)

When on horse-stealing expeditions in winter, the Indians protected their feet by filling their mocassins with "dried bunch grass" (Denny, 1957). The material was probably sedge, since the dried leaves of sedge are useful for this purpose. (Laplanders for centuries have protected themselves from extreme cold by stuffing boots and mittens with sedge leaves.)

Carex nebraskensis (Nebraska Sedge)

Blackfoot: *So-yo-toi-yis* (spring grass) or *I-ta-pat-anis* (cuts-your finger) (McClintock, 1910).

This was thought to be the favorite food of the buffalo and, hence, was tied around the horn of the sacred buffalo skull when the latter was used in ceremonials. Recent studies at Yellowstone and in northern Canada have shown that about 65-70 percent of the buffalo diet is made up of sedges and other grass-like wetland species. Grasses were next in

importance, making up about 25-30 percent of the diet. Buffalo can utilize, and thrive on, much poorer quality forage than can domestic cattle.

Scirpus acutus (Great Bulrush)

The roots, both raw and cooked, were eaten by the Indians (Blankinship, 1905).

Scirpus paludosus (Prairie Bulrush)

The large pear-shaped tubers were dug in the autumn and used for food (Blankinship, 1905).

Araceae (Arum Family)

Acorus calamus (Sweet Flag, Calamus)

This species was an object of barter among the Indians of eastern Montana and was used by them to cause abortion. Also, they chewed and swallowed the rootstock as a cure-all (Blankinship, 1905). Gilmore (1919) listed several uses for this species: as a carminative; a decoction was taken for fever; the rootstocks were chewed as a remedy for toothache; an infusion of the powdered rootstock was drunk for colic; the rootstocks were chewed, a decoction was drunk, or it was used in the smoke treatment as a cure for colds. Cree medicine bundles in the Glenbow-Alberta Institute contained what appeared to be rootstocks of sweet flag, called by the Cree *wee-kess*, 'muskrat root'. The peeled, bitter-tasting rootstock was chewed by the Cree and the liquid swallowed to relieve a sore throat; the ground 'root' mixed with water was taken for an upset stomach. The Saulteaux called the species *wike*. The ground 'root' was mixed with tobacco and the smoke inhaled for headache; the crushed 'root', mixed with hot water, was applied as a poultice to a sore throat, a sore chest, a toothache, or to relieve cramps (Leech, n.d.).

Juncaceae (Rush Family)

Juncus balticus (Wire Rush, Baltic Rush)

A brown dye that shaded imperceptibly into green was obtained from the stems of wire rush (Murphy, 1959).

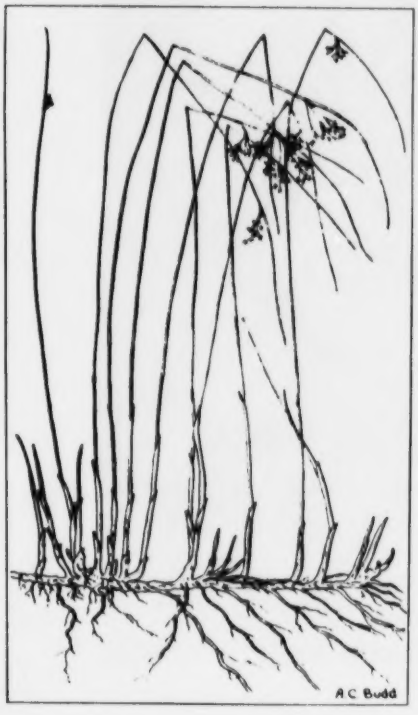


Fig. 15. Baltic rush, wire rush, *Juncus balticus* var. *montanus*.

Fig. 16. Prairie onion, *Allium textile*.

Liliaceae (Lily Family)

Allium spp. (Wild Onions)

Blackfoot: *Pis-sats'e-mi-kim* (Tims, 1889); *San-ki-pi-satsi-nikim* (Murphy, 1959); *Pe-sar-chee-nik-kim* (Cat Face, 1963).

Murphy (1959) stated that the Blackfoot name was given by them to several species of wild onion, including *A. cernuum*, *A. schoenoprasum*, and *A. textile*. Onions were gathered in May or June, were boiled with meat, or were preserved for later use. Captain Lewis (DeVoto, 1953), when in western Montana, probably referred to *A. textile* when he wrote, "I met with great quantities of a smal onion about the size of a musquit ball and some even larger; they were white, crisp and well flavored. I geathered about a half a bushel of them before the canoes arrived." The species was known as *woo-she-ka-doo-ma-she* to the Cree.

Fig. 17. Wild chives, *Allium schoenoprasum* var. *sibiricum*.

Allium cernuum (Nodding Onion)

Blackfoot: *Pesat-se-nekim* (funny vine) (McClintock, 1910).

The bulbs and leaves were eaten raw and were used as flavoring.

Fig. 18. Nodding onion, *Allium cernuum*.

Calochortus apiculatus (Mariposa Lily)

The bulbs were dug and eaten (Blankinship, 1905).

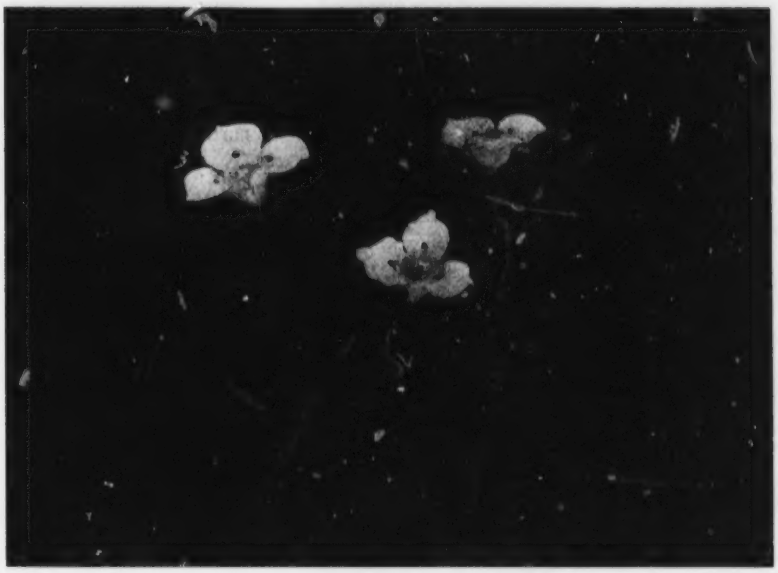


Fig. 19. Mariposa lily, *Calochortus apiculatus*.

Camassia quamash (Blue Camas)

Blackfoot: *Miss-issia* (McClintock, 1910).

Father De Smet (Chittenden and Richardson, 1905) described the gathering and cooking of camas: " I cannot pass over the camas root and the peculiar manner in which it is prepared. It is small, white, vapid onion, when removed from the earth, but becomes black and sweet when prepared for food. The women arm themselves with long, crooked sticks to go in search of the camas. After having procured a certain quantity, by long and painful labor, they make an excavation in the earth from 12 to 14 inches deep, and of proportional diameter, to contain the roots. They cover the bottom with closely-cemented pavement, which they make red-hot by means of fire. After having carefully withdrawn the coals, they cover the stones with grass or wet hay; then place a layer of roots, another of wet hay, a third of bark overlain with mold,

whereon is kept a glowing fire for 50, 60, and sometimes 70 hours. The camas thus acquires a consistency equal to that of the jujube. It is sometimes made into loaves. It is excellent, especially when boiled with meat. If kept dry it can be preserved for a long time."

Fig. 20. Blue camas, *Camassia quamash.*

Father Nicholas Point (Donnelly, 1967), who is credited by some with providing Father De Smet with much of his information, also described the gathering and cooking of the camas: "The root of the camas is like that of an onion, which it also resembles in the disposition of its layers inside. The root tastes something like a prune and a chestnut. It is eaten with pleasure, but its digestion is accompanied by very disagreeable effects for those who do not like strong odors or the sound that accompanies them. The root is gathered by means of a stick with a claw on one end, giving it the appearance of a shoemaker's hammer. While the left hand grasps the stick, which is like the handle of the hammer, the right hand thrusts the claw into the earth and extracts the root with as much rapidity as skill. The work is relegated to the women, being carried on from sunrise to four o'clock in the afternoon. To preserve the camas, and above all to make it palatable, it must be cooked. To do this you dig in the earth a circular hole a few inches in

depth and with a diameter about equal to that of an ordinary wagon wheel. This done, you fill the hole with wood, which you burn until you have a bed of glowing embers. On this bed of embers you spread stones and over the stones a layer of earth. On the layer of earth you spread the roots and over the roots a second layer of earth. On this you place a sufficiently large quantity of wood to maintain a fire for thirty or forty hours. When all this has been done, you have a food that can be preserved for years."

Henry (Coues, 1897) reported that, "The want of sugar or molasses put us to the experiment of making a decoction of commass root, or sweet onion, which produces a kind of syrup preferable to molasses to sweeten coffee, but when too much used caused wind and griping." The camas was gathered in July, about the time when the lower flowers on the flower stalk began to fade (Blankinship, 1905).

Disporum trachycarpum (Fairy-bells, Rough-fruited Disporum)

Blackfoot: *Im-a-toch-kot* (dog feet) (McClintock, (1910); *Eimi-dagh-goot* (dog's feet) (Many Guns, 1961).

The raw berries were eaten.

Fig. 21. A. Fairy-bells *Disporum trachycarpum*. (fruit edible). B. Two-leaved Solomon's seal, *Maianthemum canadense* var. *uterius*. C. Clasping-leaved twistedstalk, *Streptopus amplexifolius*. (B.and C. have poisonous fruits).

Erythronium grandiflorum (Glacier lily, Dog-tooth Violet)

The bulb-like roots were eaten to a limited extent and were crushed and used as a poultice on boils (Blankinship, 1905).

Fritillaria pudica (Yellow-bell)

The bulbs were eaten (Blankinship, 1905).

Fig. 22. Yellow-bell, *Fritillaria pudica*.

Lilium philadelphicum var. *andinum* (Western Wood Lily)

The crushed or chewed flowers were applied as a poultice for the bite of a small, brown, poisonous spider (Gilmore, 1919), probably *Loxosceles* sp.

Smilacina stellata (Star-flowered Solomon's-seal)

The round, slender root was gathered in the fall and dried. The powdered root was applied to wounds to cause clotting of the blood (Murphy, 1959).

Fig. 23. Western wood lily, *Lilium philadelphicum* var. *andinum*.

Fig. 24. Star-flowered Solomon's-seal, *Smilacina stellata*.

Veratrum eschscholtzii (False Hellebore)

Blackfoot: *Et-arva-asi* (makes-you-sneeze) (McClintock, 1910); *Etawa-asi* (Murphy, 1959).

The root of this poisonous plant was gathered in the fall or spring and dried. The dried, crushed root was snuffed for headache. The root of this species was one of several poisonous roots that were ingested for suicide. This was probably the root called *Taw'haa* by the Gros Ventre, which was pounded and used as snuff in order to clear the head in case of cold or headache.

Xerophyllum tenax (Bear-grass)

Blackfoot: *Ah-pays*.

The similarity in appearance of bear-grass and the next species,

Yucca glauca, undoubtedly has led to confusion among observers as to their uses. Father Nicholas Point (Donnelly, 1967) referred to bear-grass when he wrote: "Its stem is about three feet high. Halfway up the stem begins a pyramid of blossoms matted closely together, narrowing to a point at the top. Its base is protected by a kind of tough, long and sharp leaf." But he may have referred to *Yucca glauca* when he continued: "From the roots can be made soap and, in times of emergency, this root might also serve as food." The roots were grated and put into boiling water to treat breaks and sprains (McClintock, 1910). Grated roots were used to stop bleeding; a poultice of chewed roots was applied to wounds (Lancaster, 1966).

Fig. 25. Bear-grass, *Xerophyllum tenax*.

Yucca glauca (Soapweed)

Blackfoot: *Ek-siso-ke* (sharp vine) (McClintock, 1910); snake weed (Ewers, 1955).

The roots were employed as a soap substitute, said to be particularly valuable as a hair-wash (Blankinship, 1905). Grated roots were placed in boiling water for treatment of breaks and sprains; swelling was reduced by holding the injured limb in the rising steam. Grated roots were placed on cuts to stop bleeding. Roots were boiled, and the liquid was applied to saddle sores (Ewers, 1955).

Zygadenus gramineus (Death Camas)

Blackfoot: *E-cramps* (Murphy, 1959).

The mashed bulbs of this poisonous species were used as an external cure for boils and rheumatism and in easing the pain caused by sprains and bruises. The material was bound as a poultice on the affected part for about 12 hours. To cure rheumatism, fresh bulbs were mashed and rubbed on the affected joint twice daily for about 30 days (Blankinship, 1905).

Fig. 26. Death camas, *Zygadenus gramineus*.

Class - Dicotyledoneae (Dicotyledons)

Salicaceae (Willow Family)

Populus spp. (Poplars, Cottonwoods)

Blackfoot: *As-si'tsix-im* (Poplar) (Tims, 1889).

The various species of cottonwood were used for firewood and as shelter for winter camps; the young twigs and bark from larger branches were fed to horses when other forage was not available; the inner bark was eaten and sometimes was used in the smoking mixture (Blankinship, 1905). Bark was taken on war parties as food for horses. Fidler (MacGregor, 1966) recorded that "It is generally the upper branches of the Poplar that are dry and fit for firewood, which they procure by tying a hooked stick to the end of a very long pole and pull down the single detached branches one by one." Thompson noted that "The poplar and aspin make the best of fire wood for a tent, the wood does not sparkle, and the

smoke is mild; the smoke of no other wood should be used for drying meat" (Tyrrell, 1916). A cottonwood pole formed the centrepiece at the Sun Dance ceremony. A kind of punk made from the inner bark of the cottonwood tree was called *apustam* and was used in the ceremonial lighting of pipes (Lancaster, 1966). When stealing horses, warriors rubbed cottonwood sap on their bodies to disguise the human scent (Ewers, 1958).

Populus species figured in Blackfoot place names as follows: Slideout, Alberta, was called *ehpitset-sowaskoyi*, 'point of timber running out'; the names High River, Alberta, and the Highwood River came from *spitsi*, 'tall trees'; Augusta, Montana, was known as *spitsi*, 'tall trees', also; the area of Pincher Creek, Alberta, was *umpska-spitsi*, 'south tall trees'.

Populus sargentii (Western Cottonwood)

Blackfoot: *A-set-sik-sim; a-tse-tsi-ksim* (cottonwood).

The bark provided forage for horses; a yellow dye was made from the leaf buds (Gilmore, 1919).

Populus tremuloides (Aspen Poplar, Trembling Aspen)

The inner bark was eaten in the spring; the young bark provided winter feed for horses.

Fig. 27. Trembling aspen, *Populus tremuloides*.

Salix spp. (Willows)

Blackfoot: *O-che-pes* (Cat Face, 1963); *otsipis* (Uhlenbeck and van Gulik, 1930).

Twigs of species such as *Salix discolor* were gathered and preserved, steeped in boiling water, and the decoction taken to cure fever or as a painkiller. *S. exigua* and others were used to make the framework of the sweat lodge (in Blackfoot, *tsiskani*), which was then covered with skins and filled with steam produced by pouring water over hot rocks. After profuse sweating had been induced, an individual was taken out and doused with, or plunged into, cold water. The sweat bath was an honored institution. In it the Blackfoot purified themselves, asked for strength, fought sickness, and found relief from trouble. The diamond willow, *S. mackenzieana*, was known and its wood was used for ceremonial sticks. The spring buds of the pussy willow, *S. discolor*, provided a red dye (Ewers, 1958). Backrests, part of the furniture of the tipi, were made of willow sticks (Ewers, 1958). Tipi pegs and pins were usually of willow. Willow sticks were used as lodgepoles for small hunting tipis (Uhlenbeck, 1911).

Fig. 28. Willow, *Salix* sp.

Buckets, basins, and other containers were made from the lining of the buffalo paunch, which was torn off in large pieces and stretched over a flattened willow hoop at the bottom and top. The hoop was sometimes inside, sometimes outside, the lining. If on the outside, the bottom hoop was sewn to the paunch lining, the holes being sealed with gum or tallow.

'Bull boats', used occasionally by the Blackfoot, consisted of a circular frame of willow over which was stretched a buffalo hide. (For prolonged use, a mixture of tallow and ashes, applied daily, was used for waterproofing.)

Willows figured in Blackfoot place names, for example, Willow Hill (location unknown) was *pak-kitze-kimi-kway*; the present Mosquito Creek, Alberta, was *pak-si-may-so-yiskway*, 'white willow place' (Dawson and McConnell, 1884); Willow Round, Montana, was *apukwits'ipeska*, 'wide willow flat', translated as 'willows all around', then abbreviated to 'willow round'.

Betulaceae (Birch Family)

Alnus tenuifolia (River Alder)

Blackfoot: *A-muck-ko-iystis* (red mouth bush) (McClintock, 1910).

A decoction of the inner bark was used to make an orange dye (Blankinship, 1905) or a red-brown dye (Murphy, 1959). Chewing of the bark caused the mouth to become red, which accounts for the Indian name. A hot drink was made from the bark and was taken for scrofula.

Betula spp. (Birch)

Blackfoot: *Sihokini* (Schultz, 1962); *se-ko-ki'ni* (Tims, 1889).

Both *Betula papyrifera* and *B. occidentalis* occur in the Blackfoot country. The latter is most common and likely was the species referred to by Tims (1889) as *sik-se-ko-ke'ni*, 'black birch'. Wooden bowls may have been made from birch. Birch bark was called *ekisniss* by the Blackfoot.

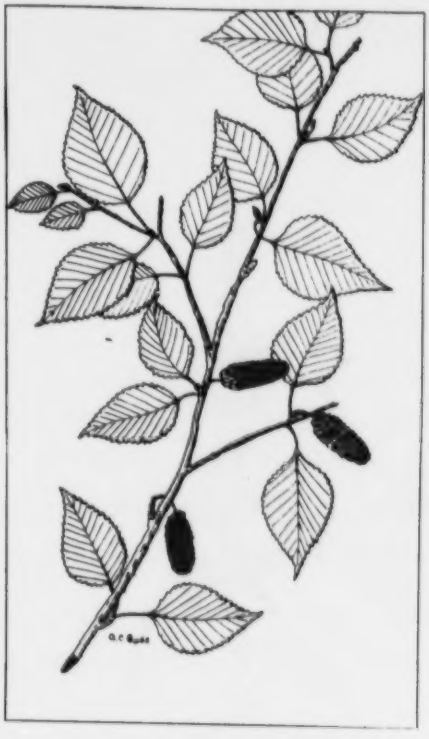


Fig. 29. River birch, *Betula occidentalis*.

The bark of birch trees is marked by horizontal lenticels, becoming long and narrow on older trees. The Blackfoot explained these markings as follows: Old Man was blown by a great wind, which tumbled him head over heels, down the hills and over the mountains. As he tumbled along, he caught hold of trees and bushes but all broke off in his hands. Finally he caught hold of a birch tree. It was tough and, although the wind tossed Old Man up and down, the tree held. When the great wind stopped, Old Man got down from the birch tree and became very angry. He said, "You spoiled all my fun. I was running over the hills and mountains and through the woods until you caught hold of me. Now I am going to punish you." So Old Man took out his knife and gashed savagely at the tree. And the marks seen on birch trees are the scars made by Old Man's knife (Wissler and Duvall, 1908).

Urticaceae (Nettle Family)

Urtica gracilis (Common Nettle)

A decoction prepared from the root was used by the Sioux as a remedy for the retention of urine. Several tribes of Montana Indians made cordage from the stem (Blankinship, 1905).

Fig. 30. Common nettle, *Urtica gracilis*.

Polygonaceae (Buckwheat Family)

Eriogonum flavum (Yellow Umbrella-Plant)

Blackfoot: Makes-nose-bleed (Melting Tallow, 1970); *Ixtanmaitsimiskiopi* (make-bleed-root) (Uhlenbeck and van Gulik, 1930).

Melting Tallow (1970) said the Blackfoot name came from the effect of the root of this species when too much was eaten.

Eriogonum subalpinum (Subalpine Umbrella-plant)

Schultz (Schultz and Donaldson, 1930) knew the species as Kutenai tea and said it was a plant growing in gravelly stream bars. Directions for use were: boil the leaves for 5-10 minutes, learn to make it the right strength.

Polygonum bistortoides (Bistort)

Blackfoot: *Ek-sik-a-pato-spi* (look-back) (McClintock, 1910).

The root was used in soups and stews.

Rumex crispus (Curled Dock)

The green leaves were crushed and bound as a poultice on boils to draw out suppuration (Gilmore, 1919).

Rumex mexicanus (Narrow-leaved Dock)

Blackfoot: *Matoa-koa-ksi* (yellow root) (McClintock, 1910).

The species was boiled and the resulting decoction used for many complaints, including reduction of swellings. This is an introduced species and its use by the Blackfoot must have been recent.

Rumex venosus (Wild Begonia, Veined Dock)

A burnt-orange dye was obtained from the peeled roots (Murphy, 1959).

Fig. 31. Veined dock, *Rumex venosus*.

Chenopodiaceae (Goosefoot Family)

Chenopodium album (Lamb's-quarters)

The young shoots were used to make a green dye (Gilmore, 1919); the seeds were gathered for food (Blankinship, 1905).

Eurotia lanata (Winterfat)

Tea from the leaves was used as a beverage; leaves were steeped in water, which was then used to wash the hair (Murphy, 1959).

Fig. 32. Winterfat, *Eurotia lanata*.

Portulacaceae (Purslane Family)

Claytonia lanceolata (Western Spring Beauty)

Blackfoot: *Pack-op-it-skimmi* (lumpyhead) (McClintock, 1910).

The corms were dug in the spring and were eaten fresh or roasted (Blankinship, 1905).

Fig. 33. Western spring beauty, *Claytonia lanceolata*.

Lewisia pygmaea (Bitter-root)

Blackfoot: *Eks-ix-ix* (white root) (McClintock, 1910).

The root was dug as soon as the flower buds were visible above the soil, then peeled and dried. It was white in color, broke readily into small lengths, and looked like spaghetti (Grinnell, 1961). It was prepared by steaming if fresh or by boiling if dried. It was nutritious but had a bitter taste (Blankinship, 1905). The Flatheads controlled the rich digging grounds of the Bitterroot Valley of western Montana, sometimes a reason for warfare with the Blackfoot (Stubbs, 1966). Bitter-root was known as *kon-ah* to the Snake Indians. In the universal sign language of the plains, the sign for bitter-root was: Indicate shape of root with extended right index finger, other fingers closed (Clark, 1885).

Nymphaeaceae (Water-lily Family)

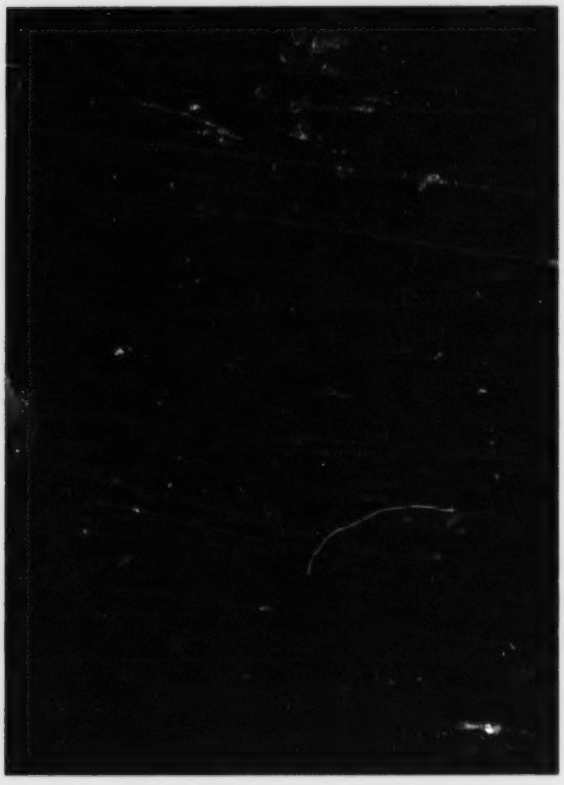
Nuphar variegatum (Yellow Pond Lily)

Several tribes in Montana used the fleshy rhizomes as food. The dried rhizomes were powdered and applied to wounds as a styptic by the Sioux

(Blankinship, 1905).

Ranunculaceae (Crowfoot Family)

This family includes several poisonous species which are used medicinally elsewhere. Among these are monkshood, *Aconitum* spp., root extracts of which are used in fevers and in acute throat and respiratory infections, and larkspur, *Delphinium* spp., long recognized as medicinal and poisonous plants (Lowie, 1954). There is little evidence of the use of these species by Blackfoot herbalists, although they were probably known to some.



Actaea rubra (Red and White Baneberry)

Blackfoot: *Sixa-wa-kasim* (black root) (the red berry form) or *sixas* (black root) (the white berry form) (McClintock, 1910).

The roots were boiled and the decoction taken for coughs and colds (McClintock, 1910), or used to treat sick horses (Ewers, 1955).

Fig. 34. Red and white baneberry, *Actaea rubra*.

Anemone multifida (Cut-leaved Anemone)

Blackfoot: *A-sa-o-pinats* (looks-like-a-plume) (McClintock, 1910).

The 'cotton' from the ripe seed heads was burned on hot coals, and the smoke was inhaled for headaches.

Fig. 35. Cut-leaved anemone, *Anemone multifida*.

Anemone patens var. *wolfgangiana* (Prairie Crocus, Pasque Flower)

Blackfoot: *Napi* (old man) (Murphy, 1959).

The greyish, silky seed heads of this species reminded the Indians of the grey heads of old men, hence the name. The crushed leaves, which contain a blistering factor, were bound on affected parts as a counter-irritant.

Fig. 36. Prairie crocus, pasque flower, *Anemone patens* var. *wolfgangiana*.

Clematis ligusticifolia
(Western Clematis)

The Indians steeped the white portion of the bark for fever (Murphy, 1959) and chewed the foliage to cure colds and sore throats (Blankinship, 1905). The species was used as a horse medicine among the Nez Percé and Dakotas but apparently not among the Blackfoot. Chemical constituents of the species have been investigated (Browne, 1968).

Fig. 37. Western clematis, *Clematis ligusticifolia*.

Clematis verticellaris var. *columbiana* (Purple Clematis)

Blackfoot: *Sto-o-kat-sis* (ghost's lariat) (McClintock, 1910).

This species received its Blackfoot name because it crept over the ground and grew over nearby vegetation. As they walked along trails, the Indians were sometimes tripped unexpectedly.

Thalictrum dasycarpum (Tall Meadow-rue)

The partially ripened fruits were harvested and kept for their pleasant smell. Some tribes in Montana stimulated horses on long marches by forcing them to snuff powdered meadow-rue (Gilmore, 1919).

Thalicturm occidentale (Western Meadow-rue)

Blackfoot: *At-sina-mo* (Gros Ventres scent) (McClintock, 1910).

There are indications that the seed and foliage of this and similar species, kept for their pleasant smell, may have served as an insect

repellant when placed among clothing or other possessions.

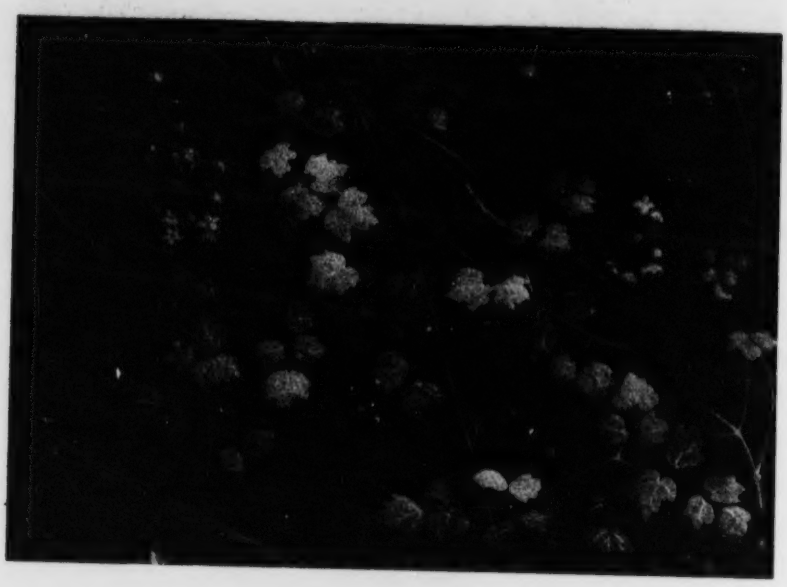


Fig. 38. Western meadow rue, *Thalictrum occidentale*.

Thalictrum sparsiflorum (Flat-fruited Meadow-rue)

The foliage was dried, ground to a fine powder, and was administered by mouth to make a horse long-winded, spirited, and enduring (Ewers, 1955).

Berberidaceae (Barberry Family)

Berberis repens (Creeping Mahonia)

Blackfoot: *Otsque-eina* (blue berry) (McClintock, 1910).

A decoction of the bark of the root was used for stomach trouble, mountain fever, kidney trouble, fever, and as a tonic (Blankinship, 1905). The strongly acid ripe fruit was eaten. A yellow dye was obtained from the roots.

Fig. 39. Creeping mahonia, *Berberis repens*.

Capparidaceae (Caper Family)

Cleome serrulata (Bee Plant)

The whole plant was used to make a tea, consumed to alleviate fever (Murphy, 1959).

Cruciferae (Mustard Family)

Physaria didymocarpa (Double Bladder-pod)

Blackfoot: *Pa-kito-ki* (grey leaves) (McClintock, 1910).

The Blackfoot chewed the plant and swallowed the juice for sore throats, also for cramps and stomach trouble. The plant was boiled in water and used to reduce swellings.

Saxifragaceae (Saxifrage Family)

Heuchera cylindrica (Rough-leaved Alum-root)

A decoction of the root was used as an astringent and, particularly,

as a remedy for diarrhea (Dayton, 1937).

Heuchera flabellifolia (Small-leaved Alum-root)

Blackfoot: *Apos-ipoco* (tastes dry) (McClintock, 1910); dry root (Ewers, 1955).

The foliage was pounded up and applied wet to sores and swellings. The root was steeped and the decoction used as an eyewash (Murphy, 1959). The roots were boiled and the liquid taken internally for stomach troubles and cramps. *Heuchera* spp. were used in the treatment of saddle sores on horses.

Fig. 40. Alum-root, *Heuchera flabellifolia*.

Heuchera richardsonii (Richardson's Alum-root)

The scaly rootstocks were chewed as a cure for diarrhea (Budd and Best, 1964).

Ribes spp. (Currants and Gooseberries)

The fruits of most species of *Ribes* were used as food (Blankinship, 1905). Gooseberries, *Ribes hirtellum*, *R. oxyacanthoides* (in Blackfoot, *paksinisiman*), withered away soon after being picked and, hence, were not preserved for later use (Mountain Horse, n.d.). The Blackfoot legend, 'The Eyes of *A-pe'si* (coyote)', tells us how Old Man once lost his eyes. He borrowed eyes from the coyote and, as he did not want to leave coyote blind, he put gooseberries into the eye sockets, spat

on them, and coyote could see. And ever since, the eyes of the coyote shine in the dark and look like gooseberries (Fraser, 1959).

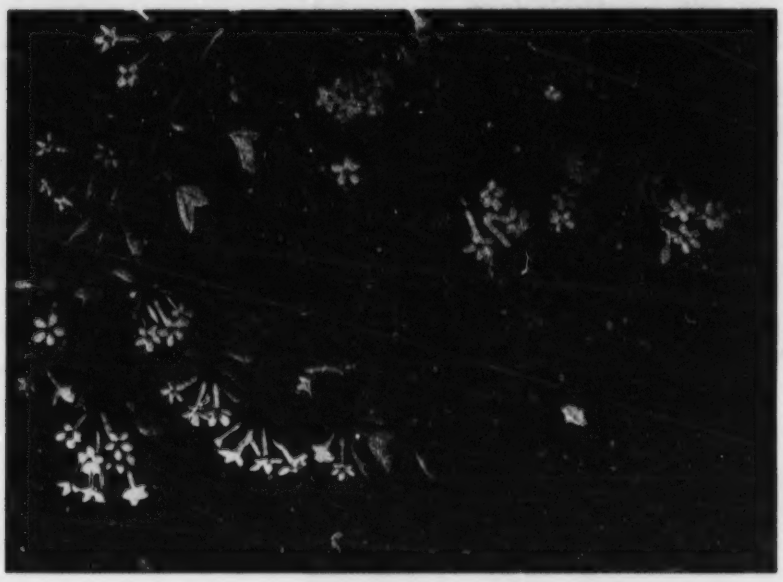


Fig. 41. Golden currant, *Ribes aureum*.

Ribes americanum (Wild Black Currant)

A decoction of the root was taken for kidney ailments and was used by women in treatment of uterine troubles (Grinnell, 1961).

Rosaceae (Rose Family)

Amelanchier alnifolia (Saskatoon-berry, Service-berry)

Blackfoot: *Oko-nok* (the shrub), *oo-coo-noo-kee* (the berry) (Burkitt, n.d.), *Ok-kun-okin* (berry) (McClintock, 1910), *Ok-a-nook* (Murphy, 1959), *okonoki* (Uhlenbeck and van Gulik, 1930).

The modern surname Oka is an abbreviation of the name for the saskatoon-berry. It was probably the most important vegetable food of the Blackfoot. The berries were used in great quantities in soups, stews, and meats, and were dried for winter use (Blankinship, 1905). A soup made from buffalo fat and berries mixed with buffalo blood was a favorite dessert at Blackfoot feasts (Ewers, 1958). During the berry-

picking season, the camp was moved to a favorable location. Women and girls gathered the fruit in rawhide bags, which, when filled, were emptied into larger storage bags. Later, the fruit was dried in the sun (Wissler, 1910). A forked stick of the saskatoon (in Blackfoot, *satapikoyiksim*) was used in religious ritual.

Fig. 42. Saskatoon-berry, service-berry, *Amelanchier alnifolia*.

The species was discussed by all early explorers, comments by Thompson (Tyrrell, 1916) being typical: "On the great Plains there is a shrub bearing a very sweet berry of a dark blue color, much sought after, great quantities are dried by the Natives; in this state, these berries are as sweet as the best currants, and as much as possible mixed to make Pemmecan; the wood of this shrub or willow is hard, weighty, and flexible but not elastic and, whenever it can be procured, always forms the Arrow of the Indian ...."

According to Grinnell (1913), arrows (in Blackfoot, *hopes* or *ahp-see*) were made of shoots of saskatoon or choke cherry, which were brought into the lodge, peeled, roughly smoothed, tied in bundles, and hung up to dry. After drying, the bundles were taken down and the shoots were smoothed and reduced to the proper thickness using a grooved piece of sandstone as sandpaper. After reduction to the proper thickness, the shoots were straightened by bending with the hands, and sometimes with the teeth, and were then passed through a circular hole drilled in a

buffalo rib, or in a mountain sheep's horn. This acted in part as a gauge of the size and in part as a smoother, for if the arrow fitted tightly it got a good polish. Blackfoot arrows had three grooves, made by leaving small projections in the holes formed in the rib bone or sheep's horn. Feathers were attached to the grooves. Arrowheads, originally of stone but later of metal, were put in a slot cut in the other end of the arrow shaft. Occasionally points were made from bone or horn.

Dried saskatoon berries were a common article of trade. For example, Henry (Coues, 1897), in writing about the trade with the Blackfoot, said: "They gave us plenty of dried poires (saskatoon-berries) and fresh choke cherries ... would bring provisions and berries to trade as they had no furs ... with small bags of berries, begging tobacco in return .... Their trade consisted of dried berries, pounded meat, grease, back fat, dressed buffalo skins and horses, all of which we got very cheap .... The Bloods came to trade 25 beavers, some dried provisions, and berries, turnips, etc." Fidler (Johnson, 1967) while at Chesterfield House, commented on the trade in berries: " ... the rest made 20 bags of Pemmican & 3 for myself 2 of Saskutten Berries contg. 8 gallons of Berries each bag weighs 101 lbs & a Bag with 26 lbs of Hard Berries (choke cherries), the weight of it 83 lbs." Later he commented on the work of his men, who were engaged in " ... the cleaning and winnowing of dried Saskutten berries. The quantity produced was 51 gallons."

Thompson (Tyrrell, 1916) described the making of pemmican, "... a wholesome well tasted nutritious food, upon which all the persons engaged in the Furr Trade mostly depend for their subsistence during the open season; it is made of the lean and flesh parts of the Bison dried, smoked and pounded fine; in this state it is called Beat Meat; the fat of the Bison is of two qualities, called hard and soft; the former is from the inside of the animal, which when melted is called hard fat (properly grease) the latter is made from the large flakes of fat that lie on each side of the back bone, covering the ribs, and which is readily separated, and when carefully melted resembles Butter in softness and sweetness. Pimmecan is made up in bags of ninety pounds weight, made of the parchment hide of the Bison with the hair on; the proportion of the Pemmecan

when best made for keeping is twenty pounds of soft and the same of hard fat, slowly melted together, and at a low warmth poured on fifty pounds of Beat Meat, well mixed together, and closely packed in a bag of about thirty inches in length, by near twenty inches in breadth, and about four in thickness which makes them flat, the best shape for stowage and carriage." The name pemmican comes from the Cree *pimmi*, signifying meat, and *kon*, fat. One pound of pemmican was thought to be equal in nutritive value to four pounds of meat.

Blackfoot names of localities included: Cherry Coulee, *ami-onask-way*; Many Berries Coulee, *ako-niskway*; Many Berries Creek, *aka-ehniskway*; and Many Cherry Bushes Valley, *aka-onaskway* (Dawson and McConnell, 1884). Rosebud Creek was known to the Cree as *mis-sas-ka-too-mina*, Saskatoon or Service-berry Creek.

Crataegus douglasii (Hawthorn)

The fruits of hawthorn were eaten fresh or were dried for winter use. The wood was used to make 'camas sticks' for use in digging roots (Blankinship, 1905). Sullivan, Secretary to the Palliser Expedition (Palliser, 1863), noted in a report: "Crataegus ... the latter wood is the hardest in the country and is used by the half-breeds for pegs in carts and other articles in which strength is an object.

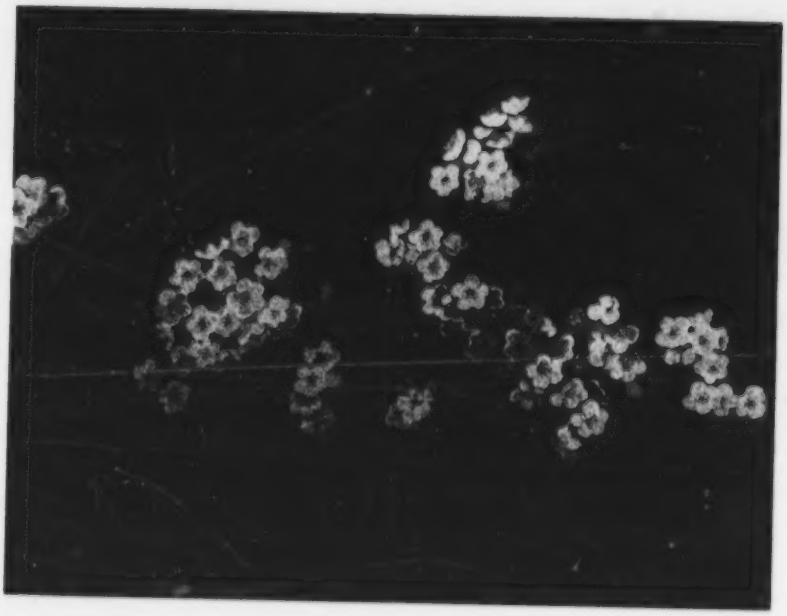


Fig. 43. Hawthorn, *Crataegus douglasii*.

Fragaria virginiana (Wild Strawberry)

Blackfoot: *Otsistsini* (Uhlenbeck, 1911); *o-tsis-tsin* (Tims, 1889).

The fruits were eaten raw but were too juicy to preserve, although Blankinship (1905) stated that they were dried and stored for winter use. The leaves were infused into a tea. A decoction of the roots was used in treatment of diarrhea. The Hand Hills, Alberta, were called by the Blackfoot, *Oht-tchis-tchis*, Strawberry Hills (Dawson and McConnell, 1884).

Fig. 44. Wild strawberry, *Fragaria virginiana*.

Geum triflorum (Three-flowered Avens, Old Man's Whiskers, Prairie Smoke)

Blackfoot: *So-ya-ots* (lies-on-his-belly) (McClintock, 1910); *so-yaits* (Murphy, 1959).

The roots were boiled in water and the decoction used in the treatment of sore or swollen eyes. The ripe seeds were crushed and used as perfume. The foliage was dried, crushed, and mixed with other medicines, the mixture then being used as a tonic. The species was called *kam-mist-ka-shawik* by the Cree.

Potentilla anserina (Silverweed)

Blackfoot: *Kita-kop-sim* (garter root) or *pashsi* (dry root) (McClintock, 1910).

The roots were eaten boiled or roasted (Blankinship, 1905).

Fig. 45. Three-flowered avens, *Geum triflorum*.

Fig. 46. Shrubby cinquefoil, *Potentilla fruticosa*.

Potentilla fruticosa (Shrubby Cinquefoil)

The dry, flaky bark was used as tinder when fire was obtained by means of twirling sticks.

Prunus virginiana var. *melanocarpa* (Choke Cherry)

Blackfoot: *Pukkeep* (choke cherry) (McClintock, 1910); *puk'kip* (cherry) (Lanning, 1882); *puck-keep* (the berry), *puck-que-noos* (the shrub) (Burkitt, n.d.).

The berries were used in soups, stews, eaten raw, or pounded, including the stones, and mixed with pemmican. (The crushed stones

imparted a gritty texture to the pemmican.) Dried choke cherries were called *kap-sek*, 'hard-seed-berries'. The bark was boiled and the decoction, with sweet cicely and valerian, was used in the treatment of dysentery (Blankinship, 1905). A reddish-colored liquid, produced by boiling and straining a decoction of dried inner bark, was called *pukyo-nos* and was drunk while warm to cure a cold. The dried root was chewed and placed in wounds to stop bleeding.

Fig. 47. Choke cherry, *Prunus virginiana* var. *melanocarpa*.

Rosa spp. (Wild Roses)

Blackfoot: *Kini* (Uhlenbeck and van Gulik, 1930); *kine* (rose berries) (McClintock, 1910).

A bitter red-colored drink was brewed from the roots and was used in the treatment of diarrhea. After removal of the seeds, the fruits were eaten fresh or roasted. In winter, the dried fruits still hanging on to the bushes were used as famine food (Lamb, 1957). Rose fruits were used to make necklaces before trade beads were acquired (Middleton, 1952). The Blackfoot knew that the annual rise of the Missouri occurred at about the time the wild rose was in bloom. The Blackfoot knew Rosebud Creek as *akokiniskway*, meaning 'many rosebuds'.

Fig. 48.
Wild rose,
Rosa woodsii.

Rubus strigosus (Wild Red Raspberry)

Blackfoot: *O'to-tox-in* (Tims, 1889).

The fruit was eaten, the leaves were used in a tea, the root was scraped and boiled and the liquid given to children as a remedy for bowel trouble (Gilmore, 1919).

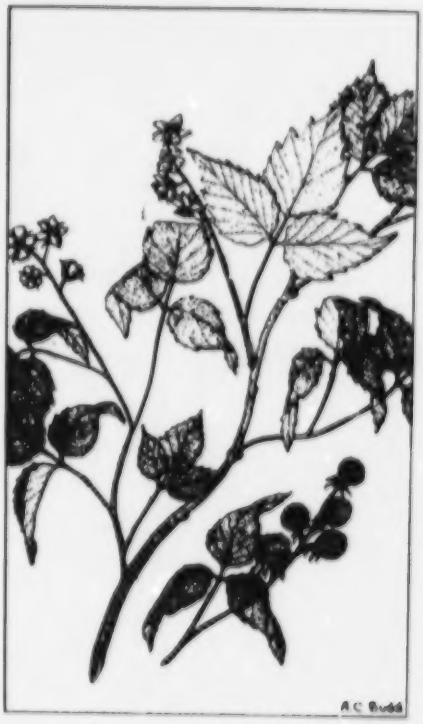


Fig. 49. Wild red raspberry,
Rubus strigosus.

Leguminosae (Pea Family)

Astragalus aboriginum (Indian Milkvetch)

According to Budd (Budd and Best, 1964), the long roots were used as food by the Indians of the Canadian prairies.

Astragalus canadensis (Canadian Milkvetch)

Blackfoot: *Kach-a-tan* (tender root) (McClintock, 1910).

The roots were gathered in the spring or fall and were eaten raw or boiled.

Astragalus crassicarpus (Ground Plum)

The fleshy pods were eaten both raw and boiled (Blankinship, 1905).

Glycyrrhiza lepidota (Wild Licorice)

The roots were chewed and the liquid swallowed to strengthen the throat for singing; a decoction of the boiled root was used as a tonic (Murphy, 1959). Gilmore (1919) listed several uses for the species; a poultice was made by chewing the leaves; for toothache, the sufferer chewed the root and held it in his mouth; the steeped leaves were applied to the ear for earache; a decoction of the root was used as a remedy for fever among children.

Fig. 50. Wild licorice, *Glycyrrhiza lepidota*.

Oxytropis spp. (Locoweed, Crazy Weed)

Blackfoot: *A-sat-chiot-ake* (rattle weed) (McClintock, 1910); *a-setse-kutuko* (rattle weed) (Murphy, 1959).

The leaves were chewed and the liquid swallowed to alleviate a sore throat. The ripe seeds in the enlarged pods rattle when shaken, hence, the Indian name.

Petalostemon candidum (White Prairie Clover)

The bruised leaves, steeped in water, were applied to fresh wounds (Blankinship, 1905). The leaves were used as a tea, the root was chewed for its pleasant taste, and a decoction of the leaves was used as a prophylactic (Gilmore, 1919).

Petalostemon purpureum (Purple Prairie Clover)

The bruised leaves steeped in water were applied to fresh wounds (Blankinship, 1905).

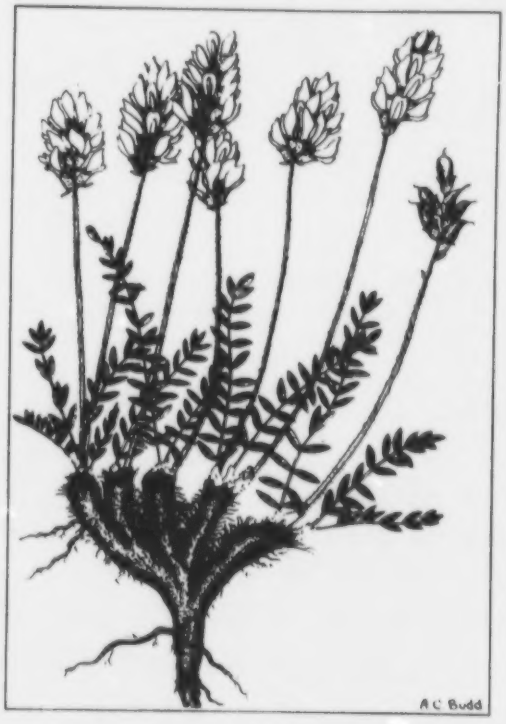


Fig. 51. Early yellow locoweed, *Oxytropis macounii*.

Fig. 52. Purple prairie clover, *Petalostemon purpureum*.

Psoralea argophylla (Silver-leaf Psoralea)

A decoction of the plant was used to wash wounds (Blankinship, 1905).

Psoralea esculenta (Indian Breadroot)

Blackfoot: *Mas'* (root of a vegetable) (Tims, 1889); *mats* (Grinnell, 1961; Kidd, 1937).

Fig. 53. Indian breadroot, *Psoralea esculenta*.

This is the species referred to by McClintock (1910) as *mass*, elk food, and misidentified by him as *Lithospermum linearifolium*, and by Middleton (1952) as *masse*, turnip. The roots were gathered when the plants were in the late flower stage of growth. They were eaten raw, roasted over an open fire or in the coals, or dried and preserved for winter use (Palliser, 1863; Murphy, 1959). Indian children, when cutting teeth, were given pieces of the root to chew; they were treated in the same manner when suffering from bowel complaints (Maisch, 1889). Wild Turnip Hill, near Lethbridge, Alberta, was formerly called *mas'-etomo*, 'turnip butte'; the area in the vicinity of Cowley, Alberta, was known to the Blackfoot as *akai-sowkaas*, 'many prairie turnips' (Dempsey, 1969). The species was known as *mish-tas-ko-she-man* to the Cree, who gathered the root during early June when the plant was in flower. The plant is the pomme de prairie or pomme blanche of the early Canadian voyageurs, the prairie turnip or prairie potato of the American settlers; the *tipsinah* of the Sioux; and the *taahgu* of the Osage Indians (Maisch, 1889). About 1800, under the name of picquotiane, it was cultivated in France for a time as a substitute for the potato.

Fig. 54. Buffalo bean, golden bean, *Thermopsis rhombifolia*.

Thermopsis rhombifolia (Buffalo bean, Golden bean)

Blackfoot: *Wudzi-eh-kay* (buffalo flower) (Murphy, 1959); tooth grass.

At the time of the flowering, the buffalo tended to leave their winter grounds for summer grazing on the prairie, hence, the Indian name. Buffalo bulls were prime for only a short time in the spring. The Indians recognized the approach of this season by the flowering of this species (Ewers, 1955). The Flatheads used the flowering of the species as an indicator, also, and, at the time indicated, crossed into the Blackfoot country "for bulls" (Brandley, n.d.; Donnelly, 1967). Children are frequently sickened after chewing the seeds.

Polygalaceae (Milkwort Family)

Polygala alba (White Milkwort)

A decoction of the root was used for earache by the Sioux of the upper Missouri River region (Gilmore, 1919).

Polygala senega (Seneca-root)

A decoction of the root was used in the treatment of respiratory diseases.

Fig. 55. Seneca-root, *Polygala senega*.

Fig. 56. Poison-ivy, *Rhus radicans* var. *rydbergii*.

Anacardiaceae (Sumac Family)

Rhus radicans var. *rydbergii* (Poison Ivy)

The Blackfoot knew and feared poison ivy (Gilmore, 1919).

Rhus trilobata (Skunk-bush)

The dried berries were ground and dusted on the pustules of smallpox in a vain attempt to treat the disease.

Aceraceae (Maple Family)

Acer negundo var. *interius* (Manitoba Maple, Box Elder)

Blackfoot: *Pahksipiskwi*.

The Crees made sugar from the sap of this species, although it does

not appear to have been within the experience of the Blackfoot. Blakiston (1863) described the sugar-making process, also noted in April 1820 by Lieutenant Hood of the Franklin Expedition: "The maple is found in small groves in the Saskatchewan River valley, and these places are resorted to in the spring by the Indian women for the purpose of sugar-making. This operation is carried on in a very primitive manner, the tree being simply notched, and a piece of wood driven in below the notch, to lead the sap, from the end of which it drips into a little pannikin of birch bark laid at the foot of the tree to receive it. These are visited once or twice a day, according to the yield, which depends very much on the weather, frosty nights and warm days being the best. The syrup thus collected being boiled down in kettles, sugar is produced in the form of hard cakes—very pleasant to eat by itself, but nothing to be compared to cane sugar in its sweetening properties. Any unusually cold weather occurring will put a stop to the flow of sap, and cause lamentation among the women."

Balsaminaceae (Touch-me-not Family)

Impatiens capensis (Touch-me-not)

The stems and leaves were pulped and were applied to the skin in the treatment of rash and eczema (Gilmore, 1919).

Malvaceae (Mallow Family)

Sphaeralcea coccinea (Scarlet Mallow)

The plant was chewed and the material was applied to sores and wounds as a cooling and healing salve. Medicine men of some tribes rubbed the chewed paste over their hands and arms; the coating protected the skin from the scalding effects of boiling water and enabled the medicine man to retrieve a piece of meat from a pot of boiling water (Gilmore, 1919).

Fig. 57. Scarlet mallow, *Sphaeralcea coccinea*.

Cactaceae (Cactus Family)

Lophophora williamsii (Peyote)

Peyote is not native to the Blackfoot country. It has been imported for use in the ceremonial rites of the Native American Church. The plant contains a hallucinogen, mescaline (Farnsworth, 1968). When the plains culture began to disintegrate rapidly after about 1850, peyote spread northward and gained acceptance among the tribes. It afforded a way to seek visions, and, hence, provided an escape from the humiliation of defeat (Farb, 1968).

Mamillaria vivipara (Cushion or Ball cactus)

Blackfoot: *Ost-stax-ie-mon* (fruits) (Murphy, 1959).

The ripe fruits were eaten.

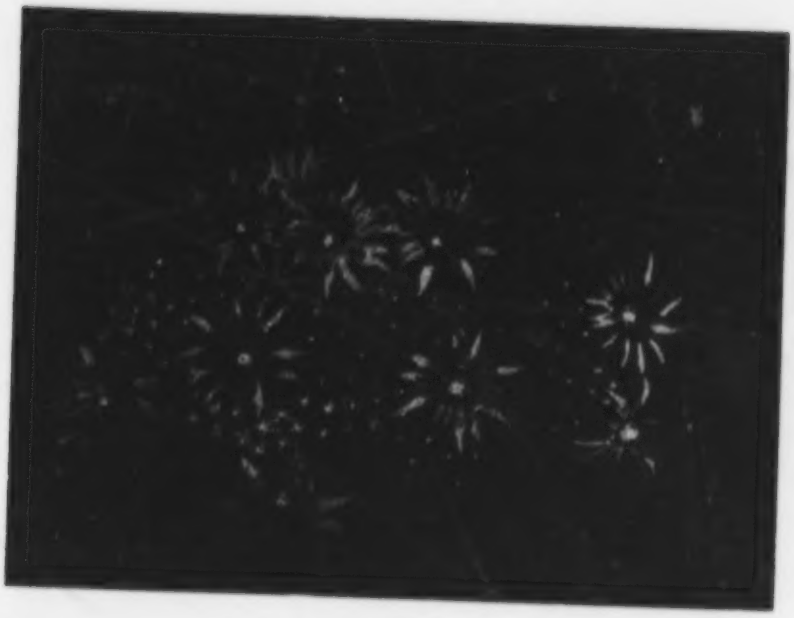


Fig. 58. Cushion or ball cactus, *Mamillaria vivipara*.

Opuntia polyacantha (Prickly-pear Cactus)

Blackfoot: *Ohkotokwatsis* (many sharp points) (Schultz, 1962); *o-tok'-tsist* (Uhlenbeck, 1913).

The stems were eaten in times of scarcity, the procedure being to boil the joints; the skin, with its spines, was then easily removed (Gilmore, 1919). The mucilaginous juice was used as sizing to fix colors, freshly cut stems being rubbed over a design. Peeled stems were bound to wounds as a dressing. To clear muddy water, the fleshy stems were split and placed in a container of water, which was quickly cleared by the exuded sticky juice (Blankinship, 1905). To remove warts and moles, the procedure was to cut them in all directions and then rub in the 'fuzz' from the cactus (Murphy, 1959). A mechanical means of curing was to stick the offending part of the body full of cactus spines, which were then ignited. The lighted spines that sputtered and sparked the most were thought to have done the most good (Mountain Horse, n.d.).

Fig. 59. Prickly-pear cactus, *Opuntia polyacantha*.

A statement is made in the Blackfoot legend 'The Seven Stars' that "When it is dark we will scatter prickly-pears all around the lodge (as protection from a sister who had turned into a bear)."

Elaeagnaceae (Oleaster Family)

Elaeagnus commutata (Silver-berry, Wolf-willow)

Blackfoot: *Miss-is-a-misoi* (stink wood) (McClintock, 1910); *cupsi* (the berry) (Murphy, 1959).

The fruits were used as a famine food. The seeds were used as beads (in Blackfoot, *kis-tchim-mon*, beads made from seeds) for necklaces were sewn as a decoration on antelope skin dresses (Murphy, 1959). The name 'stink wood' was given because of the objectionable smell of the smoke; anyone who collected wood of the species for tipi fires was an object of derision. The Blackfoot explained the objectionable smell of the smoke as follows: "Old Man lay down to sleep after telling Little Brown-Eye (his anus) to keep watch over some uneaten toasted gophers.

Soon Little Brown-Eye sounded a warning (flatus) but there was only a crow on a nearby tree. Then a lynx came along and again Little Brown-Eye sounded a warning. Old Man was sound asleep and, although Little Brown-Eye roared away, he would not wake up. The lynx ate all the gophers. When Old Man awoke, he was angry with Little Brown-Eye because it had let a lynx eat all the meat and had not awakened him. So Old Man took a stick of a kind of willow and rubbed it into Little Brown-Eye and, ever since, this willow has been known as 'stink wood'" (Wissler and Duvall, 1908).

Fig. 60. Silver-berry, wolf willow, *Elaeagnus commutata*.

Granville Stuart (1865) said the Snake Indians called the species *to-sa-bo-gah*. He went on to point out that the wood, when burning either green or dry, emits a very strong odor precisely like human excrement (in Blackfoot, *mis-sis-sa*). Stuart amused himself occasionally by setting sticks alight and then watching bystanders try to figure out who was responsible for the smell.

Fig. 61. Thorny buffalo-berry, *Shepherdia argentea*.

Shepherdia argentea
(Thorny Buffalo-berry)

Blackfoot: *Me-o-nixen* (Murphy, 1959); *miksin-itsim* (bull berry) (Tims, 1889).

The fruit, obtained by spreading a robe beneath the bush and beating the branches with sticks, was eaten fresh or was dried for winter use (Blankinship, 1905). One of the Old Man legends told how the fruit came to be gathered. "Old Man stood on the bank of a stream, looked down and saw red berries in the water. So he dived into the water but could not find the berries. He dove again and again and nearly drowned. Finally he became tired and lay down under a shady bush. Then, looking up, he saw the berries overhead. He became very angry, picked up a club, and beat the berry-bush until there was but one berry left. And that is the reason why people to this day beat buffalo berries from the bushes with sticks."

The species was variously called by Europeans 'graisse de boeuf', 'grease de buff', 'grain de boeuf', 'graisse de buffle', or 'beet-suet tree', all signifying buffalo fat, also 'bull-berry' because the buffalo were fond of it (Donnelly, 1967). The Mandans knew it by a name signifying 'rabbit-berries'. It was called by the Rees, *nar-nis*. According to Brandley (n.d.), a red dye was obtained from the small, acid berries. Chemical constituents of the species have been studied (Browne, 1968).

Onagraceae (Evening Primrose Family)

Oenothera caespitosa (Butte Primrose, Rock Rose)

Blackfoot: *Oks-pi-poku* (sticky root) or *ap-aks-ibokn* (wide leaves) (McClintock, 1910).

The root was crushed and applied wet to sores and swellings.

Araliaceae (Ginseng Family)

Aralia nudicaulis (Wild Sarsaparilla)

The roots were used in the preparation of a tonic and purgative (Blankinship, 1905).

Fig. 62. Butte primrose, rock rose, *Oenothera caespitosa*.

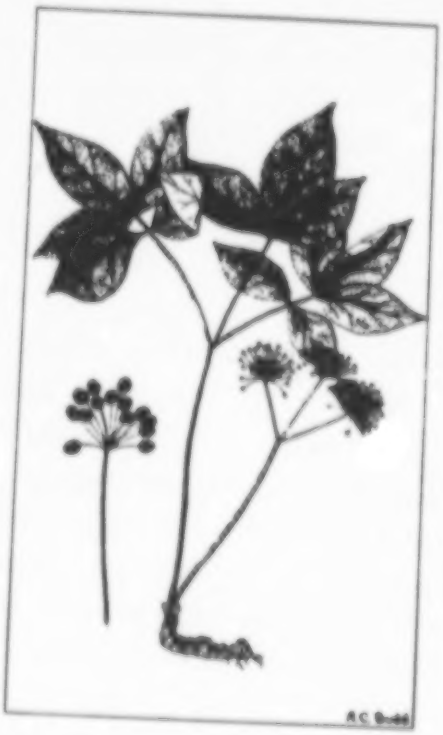


Fig. 63. Wild sarsaparilla, *Aralia nudicaulis*.

Oplopanax horridum (Devil's-club)

Plants of the species were used by the medicine men of some tribes. The aromatic root was mixed with tobacco and smoked for headache by the

Crow Indians in Montana (Blankinship, 1905).

Umbelliferae (Carrot Family)

Cicuta spp. (Water Hemlock)

The fleshy roots were known to be poisonous and sometimes were used for suicide (Blankinship, 1905). The raw roots were split and applied as a poultice to draw poison from a rattlesnake bite (Murphy, 1959). Palliser (1863) tells of a noise coming from a swamp near his camp which, according to his men, " ... they asserted to proceed from the 'carrot a moreau' (water hemlock) in consequence of its poisonous and manitou or miraculous attributes." In the 'Crazy Dance' of the Gros Ventre, blunt-pointed arrows were shot at anyone venturing outside during certain parts of the festivities. In addition, the dancers tied a pointed arrow to each bow. A piece of root of water hemlock, called *tjitaatsa* and thought to be exceedingly powerful, was attached to the shaft just behind the point. Even a slight scratch with this arrow was supposed to cause fits and death on account of the power of the medicine (Kroeber, 1908).

Heracleum lanatum (Cow Parsnip)

Blackfoot: *Po-kint-somo* (McClintock, 1910).

The spring stalks were eaten after being roasted on hot coals. They were of two kinds, *napim*, 'male', which were immature flower stalks and had to be peeled before roasting, and *skim*, 'female', which were leaf stalks and had to be peeled and split before roasting. A stalk of cow parsnip was used in the Sun Dance ceremony. A strong decoction of the roots was used by several tribes in the treatment of rheumatism and arthritis (Blankinship, 1905). A poultice of the scraped, crushed, and boiled root was applied to boils; the root was boiled and the liquid taken internally for intestinal pains, or as a physic (Gilmore, 1919). The roots were made into a poultice and applied to bruises and chronic swellings (Stevens, 1855).

Fig. 64. Western water hemlock, *Cicuta douglasii*.

Fig. 65. Cow parsnip, *Heracleum lanatum*.

Lomatium dissectum var. *multifidum* (Prairie Parsley)

Blackfoot: *O-muck-kas* (big turnip) (McClintock, 1910).

The roots were gathered in the fall. They were used to make a hot drink that was taken as a tonic by people in a weakened condition. Horses suffering from distemper were made to inhale the smoke from the burning root (Murphy, 1959), or were given a decoction made from it (Ewers, 1955). The Shoshones cut fresh roots and collected the droplets of oil that exuded from the cut surfaces. A drop of the oil was put into each eye of a trachoma victim (McClintock, 1910).

Lomatium simplex var. *leptophyllum* (Prairie Parsley)

The root was eaten raw or roasted.

Lomatium triternatum (Prairie Parsley)

The root was eaten raw or roasted.

Osmorhiza chilensis (Sweet Cicely)

Blackfoot: *Pach-co-i-au-saukas* (smell mouth) (McClintock, 1910).

A drink made from the root was taken for tickling of the throat, for colds, or for pneumonia (Murphy, 1959). The whole plant was fed to mares in the winter to put them into condition for foaling (Ewers, 1955). Harmon (Lamb, 1957) wrote that "When a baby is born it is washed in water that had been previously prepared by boiling in it a sweet-scented root." And Middleton (1952) stated that "They made necklaces of a certain sweet-smelling root." Both authors may have referred to sweet cicely.

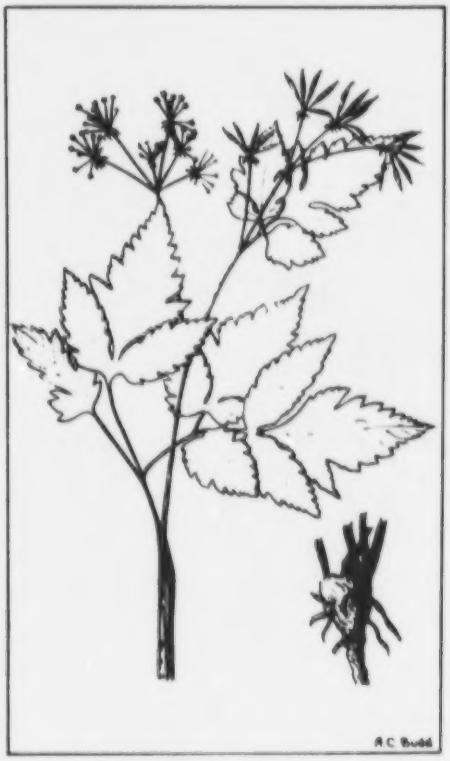


Fig. 66. Sweet cicely, *Osmorhiza chilensis*.

Perideridia gairdneri (Squaw-root, Yampa)

Blackfoot: *Nits-ik-opa* (double root) (McClintock, 1910).

The roots were eaten raw or boiled. The root was chewed and the liquid swallowed for sore throats; a poultice of the root was applied to swellings (Blankinship, 1905).

Cornaceae (Dogwood Family)

Cornus stolonifera (Red-osier Dogwood, Kinnikinnick)

Blackfoot: *Mekotsipis* (Uhlenbeck and van Gulik, 1930).

The inner bark was used in the tobacco mixture. (*Kinnikinnick*, used as a common name for this and other species, is an Algonquin term meaning 'that which is mixed'.) Hind (1860) described how the inner bark was obtained: "A few branches about three-quarters of an inch

Fig. 67. Red-osier dogwood, *Cornus stolonifera*.

thick and four or five feet long are procured, and the outer bark scraped off after having been warmed over a fire. A knife is then pressed against the inner bark and drawn upwards for six to eight inches, until the whole of the inner bark is gathered in curly clusters around the stick. The stick is then thrust into the ground over hot coals and roasted until dry when, mixed with equal portions of tobacco, it forms the favorite kinnikinnik of the North-West Indians." However, Brandley (n.d.) stated that "The Blackfeet never smoked the bark of the willow called kinnikinick." The inner bark was made into a tea and taken for various complaints (Blankinship, 1905). Beaver teeth were split, made into a circle, and covered with the bark of dogwood to make gambling wheels (Uhlenbeck, 1911).

Pyrolaceae (Wintergreen Family)

Chimaphila umbellata var. *occidentalis* (Prince's-pine, Pipsissewa)

Blackfoot: *O-maksi-ka-ka-sin* (big larb) (McClintock, 1910).

The leaves of this species were used in the tobacco mixture. A decoction of the foliage or root was used to reduce fever (Blankinship, 1905). ('Larb' is a corruption of l'herbe, a term used by the voyageurs for the various plants that made up the tobacco mixture. It was applied by the voyageurs to bearberry, the next species, while the term 'big

larb' was applied to this species.)

Fig. 68. Prince's-pine, *Chimaphila umbellata* var. *occidentalis*.

Ericaceae (Heath Family)

Arctostaphylos uva-ursi (Common Bearberry, Kinnikinnick)

Blackfoot: *Ka-sixie* (Murphy, 1959); *Kuk-see* (weed) (Palliser, 1863); *ka-ka-sin* (larb or kinnikinnick) (McClintock, 1910).

The leaves were dried and mixed with tobacco. Palliser (1863) called this the 'smoking weed'. The berries were eaten raw or were preserved for later use. This appears to be the plant called *trim-i-yah* by the Snake Indians, the leaves of which they used for smoking. The berries were edible but, if many were consumed, gave a choking sensation exactly like the choke cherry. Sacacommis was a name given by the voyageurs to the bearberry, which was used for smoking and would be carried in a bag for that purpose. The name comes from the French sac-à-commis, a clerk's bag. Hudson Bay officers knew bearberry as *jackashipuck* or *jack-asa-puck*, a name used by the Indians on the shores of Hudson Bay (Isham, 1949). Peter Fidler (Johnson, 1967) at Chesterfield House in 1801 recorded that "Young men went for *Jackasapuck*

on SS the Bad River (South Saskatchewan) above here."

Thompson commented "... the tobacco they raised had a very hot taste in smoking, and required a great proportion of bears berry weed to be mixed with it" (Tyrrell, 1916). A heavy fruit set of bearberry was taken by the medicine men as a sign of severe winter to come.

Fig. 69. Common bearberry, kinnikinnick, *Arctostaphylos uva-ursi*.

Ledum groenlandicum (Common Labrador-tea)

The species was widely used by various tribes. Thompson wrote: "I filled the pewter basin with Labrador tea, and by means of hot stones made a strong infusion, which much relieved me (of a sickness caused by eating the fat of a young bald eagle)" (Tyrrell, 1916).

Fig. 70. Common Labrador-tea, *Ledum groenlandicum*.

Vaccinium membranaceum (Tall Bilberry)

The ripe fruits were eaten fresh or were dried for winter use (Blankinship, 1905).

Oleaceae (Olive Family)

Fraxinus spp. (Ash)

Blackfoot: *Khpaksi* (Schultz, 1962).

The wood of the ash was used in the manufacture of bows, arrows, and pipestems.

Gentianaceae (Gentain Family)

Gentiana affinis (Prairie Gentain)

Blackfoot: *Ot-ska-a-pis-is-kit-sa* (blue flower) (McClintock, 1910).

The species was of no known use except for its attractive flower.

Apocynaceae (Dogbane Family)

Apocynum cannabinum (Indian Hemp)

Blackfoot: *Nuxapist* (little blanket) (McClintock, 1910).

The root was boiled in water and the decoction taken as a laxative or as a tonic and to relieve fever. The decoction was also used as a wash to prevent falling hair. Fibre made from the bark was a source of cordage for the western tribes (Blankinship, 1905).

Boraginaceae (Borage Family)

Lithospermum incisum (Puccoon)

Blackfoot: *Pono-kan-sinni* (elk food) (McClintock, 1910).

The tops and seeds were dried and used as incense. A violet dye was obtained from the roots (Blankinship, 1905; Moss, 1959). McClintock (1910) stated that the species had an edible root, but he appeared to confuse it with *Psoralea esculenta*.

Fig. 71. Puccoon, *Lithospermum incisum*.

Lithospermum ruderale (Puccoon, Wooly Gromwell, Stoneseed)

The Shoshones and Navahos for centuries used an extract of this plant as an oral birth control. Although it occurs in the area occupied in historic times by the Blackfoot, there is no evidence that it was used by them for birth control purposes. It was known to the Assiniboin, who believed that, since use of the plant prevented menstrual flow, bleeding would occur elsewhere, as in the lungs. The plant contains natural estrogens, which suppress the formation of certain hormones without which ovulation cannot occur (Stone, 1954). A tea from the leaves was used as a laxative (Murphy, 1959).

Labiatae (Mint Family)

Agastache foeniculum (Giant Hyssop)

Montana Indians used the leaves in a tea, also for flavoring in cooking (Blankinship, 1905). Flowers of the species were frequently included in Cree medicine bundles, some of which are at the Glenbow-Alberta Institute.

Fig. 72. Giant hyssop, *Agastache foeniculum*.

Lycopus spp. (Water Horehound)

Blackfoot: *Six-ocasim* (McClintock, 1910).

The species was compounded with other plants and used in the treatment of children's colds.

Mentha arvensis var. *villosa* (Wild Mint)

Blackfoot: *Sax-ida-kitsim* (quick smell) (McClintock, 1910); *cax-si-simmo* (the leaves used to flavor pemmican) (Schultz, 1962); *kak-it-simo* (Cat Face, 1963).

The leaves were used to flavor meat or pemmican or were made into a tea for use in treating various complaints (Blankinship, 1905). Traps were boiled with mint to destroy the human scent. The dried leaves were used to treat heart ailments and chest pains; about a teaspoonful chewed and swallowed constituted a dose. The saliva formed when chewing the leaf could be spat into the hand and the chest massaged around the affected area.

Fig. 73. Wild mint, *Mentha arvensis* var. *villosa*.

Monarda fistulosa var. *menthaefolia* (Wild Bergamot, Horse Mint)

Blackfoot: *Ma-ne-ka-pe* (young man) (McClintock, 1910).

A tea made from the blossoms was used as an eyewash; a tea made by boiling together the leaves and blossoms was used to cure stomach pains (Gilmore, 1919); a tea made from the

Fig. 74. Wild bergamot, *Monarda fistulosa* var. *menthaefolia*.

leaves was taken by Sioux women after childbirth (Blankinship, 1905). Boiled leaves were applied to the pustules of acne (Gilmore, 1919). The Cree called it *mi-ak-ona*; the flowers were dried and used as a perfume.

Solanaceae (Nightshade Family)

Nicotiana attenuata (Wild Tobacco)

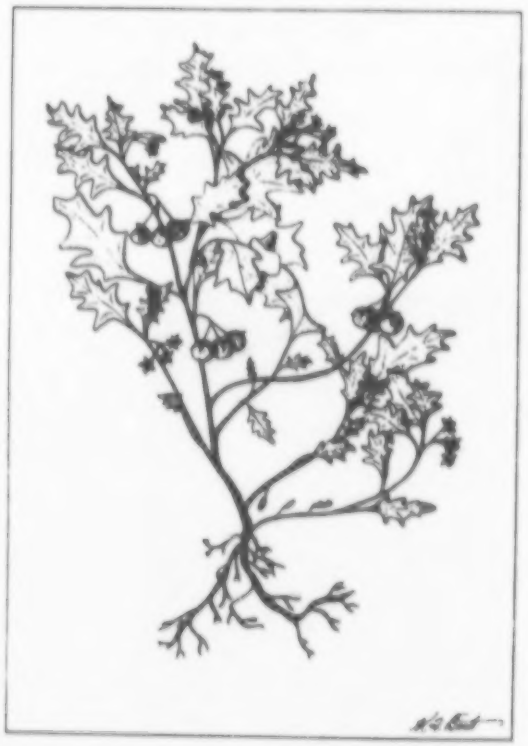
Blackfoot: *Pistacan* (Catlin, 1926); *pis-tah-kan* (Palliser, 1863); *pistaykan* (Uhlenbeck and van Gulik, 1930); *pos-toc* (Burkitt, n.d.).

Lowrie (1954) determined from fragmentary specimens that the tobacco used by the Blackfeet was *N. attenuata*; from its distribution in Montana, Blankinship (1905) thought that *N. quadrivalis* was the species involved. Both were probably used. Tobacco seed, the Blackfoot believed, was given to them long ago by a white medicine beaver. It was received by *Api-kunni*, a poor young man who became a chief as a result. The plant was called *na-wuh'-to-ski* translated by Schultz (1962) as 'hard smoke'. Tobacco was cultivated by the Blackfoot, the Tobacco Planting Ceremony being held as recently as 1955. Amos Leather, or Berry-eater, the last man to know all 230 songs associated with the ceremony, died in Calgary in 1969. A discussion of the ceremony, the spring festival of the Blackfoot, was presented by Schultz and Donaldson (1930), Grinnell (1961), and others. Also, Grinnell (1961), Brandley (n.d.),

Fig. 75. Blackfoot Tobacco Dance ceremony, 1943-44.

and others described the solemnity and ceremony associated with smoking among the Blackfoot. The Indians never learned to chew or snuff tobacco. Imported tobaccos were preferred to the locally grown product after the arrival of white traders (Tyrrell, 1916).

Blackfoot nomenclature associated with tobacco included: *ne-ets'-ti-nis*, Indian tobacco of best quality; *e'-nis*, common tobacco; *su-pi'-ksis-tsi-ma'-cis*, cutting board for tobacco; and *a-su-a-ci'-man*, decorated tobacco sack.



Solanum triflorum (Wild Tomato)

Blackfoot: *Omeka-ka-taw-wan* (gopher berries)

The species occurs on disturbed areas, for example, the mounds of dirt thrown up by burrowing animals such as gophers (ground squirrels), *Citellus* spp. The berries were boiled and given to children as a cure to diarrhea.

Fig. 76. Wild Tomato, *Solanum triflorum*.

Scrophulariaceae (Figwort Family)

Orthocarpus luteus (Owl-Clover)

Blackfoot: *E-simatch-sis* (dye) (McClintock, 1910); *e-si-match-sis* (Murphy, 1959).

The species was used to dye small skins. Two methods were used: in

the first, crushed herbage was pressed firmly upon a skin to dye it red; and second, plants in full bloom were rolled into a skin, which was dyed reddish tan throughout. A similar procedure was used to dye horsehair and feathers.

Pentstemon acuminatus (Sharp-leaved Beard-tongue)

Blackfoot: *At-si-po-koa* (fire taste) (McClintock, 1910).

The plant was boiled and the liquid taken for cramps and stomach pains or as a laxative (Murphy, 1959). A tea made from the leaves was used to stop vomiting.

Orobanchaceae (Broom-rape Family)

Orobanche ludoviciana (Broom-rape)

Blackfoot: *Ana-wawa-toks-tima* (buffalo food) (McClintock, 1910).

The plant was chewed by medicine men and blown upon wounds.

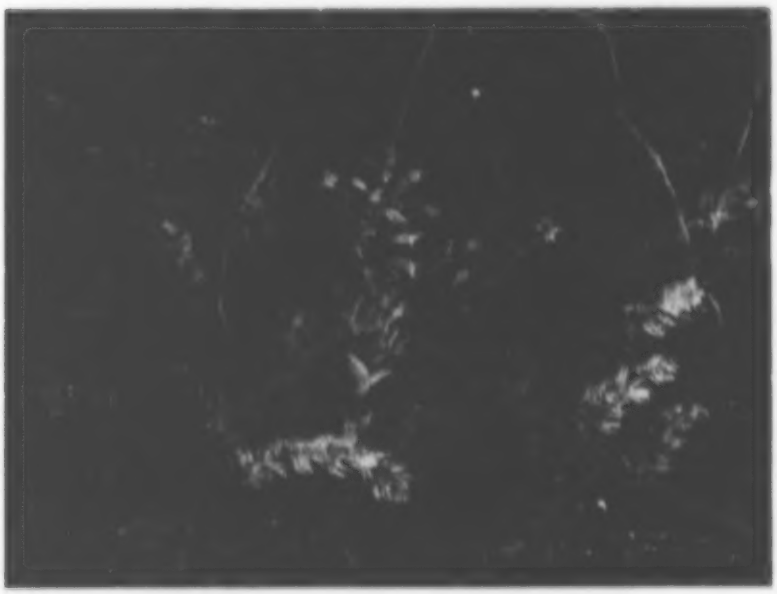


Fig. 77. Broom-rape, *Orobanche fasciculata* and *O. ludoviciana*.

Rubiaceae (Madder Family)

Galium boreale (Northern Bedstraw)

A red dye was obtained from the fine roots; if boiled too long the color changed to yellow (Murphy, 1959). According to Graham (1969), the Cree method of dying porcupine quills with the roots of northern bedstraw was:

Fig. 78. Northern bedstraw, *Galium boreale*.

"Having provided a vessel with a close cover, and one quart of water English measure, they put into it 2 3/4 ounces of the root with half an ounce of the porcupine quills. Boil them over a slow fire until the liquor but just covers the contents; the quills have now received a red tincture. Secondly, they put the quills into three pints of liquor, the infusion of the *amiscuminick* berries[1], keeping it gently boiling as before, till the liquor is about half exhausted or so low that you can take a quill out without injuring the hand. Your quills now have received a red vermilion color. Lastly put in a pint of *amiscuminick* liquor boiling hot with 3/4 ounces of the poplar ashes, take the whole off the fire, and keep stirring until it cools so as a person may put a finger

---

[1]We cannot identify *amiscuminick*, a plant that produced red, acid berries. An infusion was made by boiling the berries, then straining the decoction.

in it without pain. Then set it by for a day or a night, that the liquor may be quite cool; and when you take out the quills they will have received a beautiful durable red." Alexander McKenzie noted that the method, "...sometimes fails, and produces only a dirty brown, a circumstance which ought probably to be ascribed to the use of an undue quantity of acid."

Galium triflorum (Sweet-scented Bedstraw)

The dried flowers were used as perfume (Murphy, 1959).

Caprifoliaceae (Honeysuckle Family)

Symphoricarpos occidentalis and *S. albus* (Snowberry, Buckbrush, Wolfberry)

Blackfoot: *Ap'ini-kun* (white berry) (Tims, 1889).

The leaves were steeped to make an infusion for sore eyes (Gilmore, 1919). The slender twigs were used to make arrow shafts; the collected shrub was used to make brooms (Blankinship, 1905). The fruits were eaten in times of scarcity. A fire made from the green twigs was used to blacken the surface of newly-made pipes, which were then greased with animal fat and polished with a piece of skin (Middleton, 1952; Ewers, 1958). The liquid from boiled berries was given to horses to relieve water retention. The

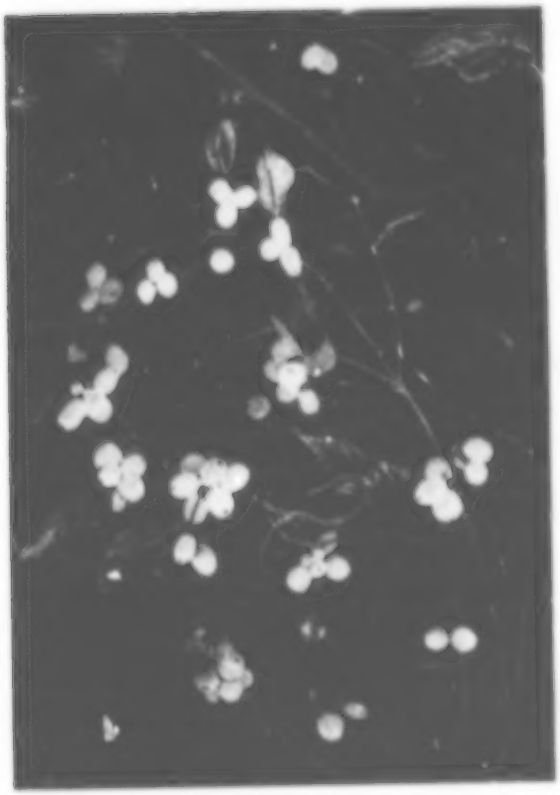


Fig. 79. Western snowberry, buckbrush, *Symphoricarpos occidentalis*.

species was called *mo-hook-kum-wat-it*, horse medicine, by the Crees (Ewers, 1955).

Valerianaceae (Valerian Family)

Valeriana edulis (Valerian, Tobacco-root)

Blackfoot: *Apoka-ikim* (smell foot) (McClintock, 1910).

The cooked root smelled like chewed tobacco and was called by the voyageurs 'racine de tabac'. Although offensive to those not accustomed to it, the root was eaten readily by the Indians (Blankinship, 1905). Known as *quee* or *quee-ah* to the Snake Indians, the root was considered to be poisonous when raw but edible after cooking in a kind of kiln. When done, it was black and sticky. It had a very strong smell, looking and smelling like plug tobacco. The person eating it, and his clothes, smelled just as strong as the root itself.

Valeriana septentrionalis (Northern Valerian, Tobacco-root)

Blackfoot: *Apoka-ikim* (smell foot)

A hot drink made from the root was used in the treatment of stomach trouble. Also, the decoction was used in treatment of colic or distemper in horses (Ewers, 1955).

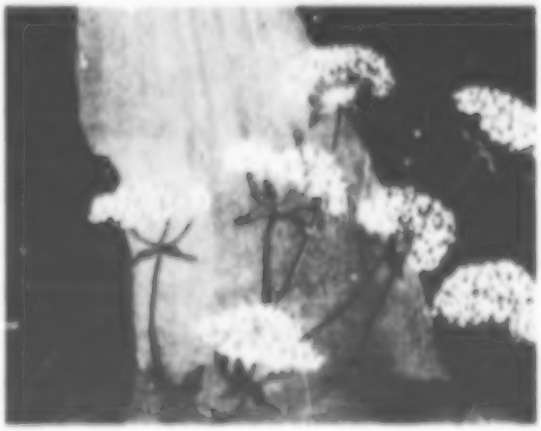


Fig. 80. Valerian, *Valeriana septentrionalis*.

Valeriana sitchensis (Mountain Valerian, Tobacco-root)

The species sometimes was used in the tobacco mixture.

Compositae (Composite Family)

Achillea millefolium (Common Yarrow)

A tea made from the whole plant was used as a laxative. A tea made from the leaves and flowers was used in the treatment of consumption, stomach trouble, or headache and was applied as a lotion to sore eyes (Blankinship, 1905). The plant was boiled and applied as a poultice to an infected fingertip or toe (Murphy, 1959).

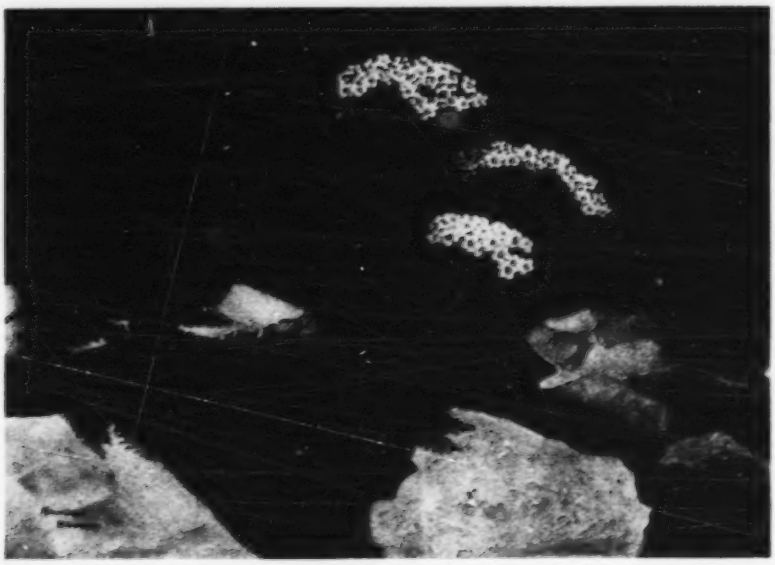


Fig. 81. Common yarrow, *Achillea millefolium*.

Anaphalis margaritacea (Pearly Everlasting)

The dried, powdered flowers were placed by the Cheyenne on the sole of each hoof and also blown between a horse's ears to make it long-winded, spirited, and enduring (Ewers, 1955). This use may have been known to the Blackfoot.

Antennaria rosea (Pink Pussy-toes or Everlasting)

The leaves were used sometimes in the tobacco mixture and were chewed by children for the flavor.

Fig. 82. Pussy-toes or everlasting, *Antennaria rosea*.

Arnica amplexicaulis (Arnica)

Blackfoot: *Ota-kap-is-chis-kit-sima* (yellow flower) (McClintock, 1910).

The ray florets are a pale yellow; the Blackfoot name indicates something of the system of plant classification used by them.

Artemisia spp. (Wormwood, Sagebrush)

The blackened, weathered leaves of sagebrush, found under bushes, were powdered and applied to rash on babies (Murphy, 1959). Horse medicine bundles contained bracts and flower heads of sagebrush (Ewers, 1955). A decoction of sagebrush leaves was taken for stomach trouble and other ailments. Sagebrusn was used as a ceremonial plant and as an incense (Gilmore, 1919).

Artemisia cana (Sagebrush, Hoary Sage Bush)

Blackfoot: *Ah-pu-tu-yis* (weasel grass) (Ewers, 1955).

The leaves were chewed to relieve thirst. A decoction of leaves was taken as a tonic and was said to be effective as a hair restorer (Blankinship, 1905). The species was regarded as good fall and winter

forage for horses (Ewers, 1955). (Modern agriculturists question this.)

Fig. 83. Sagebrush, *Artemisia cana*.

Fig. 84. Pasture sage, *Artemisia frigida*.

Artemisia frigida (Pasture Sage, Fringed Sage)

Blackfoot: *Kaksamis* (she sage) (McClintock, 1910); *kaksimi* (Uhlenbeck and van Gulik, 1930); *ninny-kaksa-miss* (Murphy, 1959); *kak-sa-mee-a* (Devine, 1965).

The Cheyenne knew the species as *he-e-wa'-nost*, 'woman's weed', because it was used by the women during the period of their menses as a tea (Hayden, 1862). The name *kaksamis*, 'she sage', suggests that Blackfoot women used it for the same purpose. The roots or tops were boiled and the liquid taken for mountain fever; the tops were chewed and the liquid swallowed for heartburn; and a tea made from the leaves was used to treat colds and coughs. Pasture sage was used in Blackfoot ritual.

Aster falcatus (Creeping White Prairie Aster)

Blackfoot: *Sik-a-pis-chis* (white flower) (McClintock, 1910).

The ray florets are usually white.

Balsamorhiza sagittata (Balsamroot)

Blackfoot: *A-pono-kauki* (paper leaves); *o-to-kap-atis* (yellow flower) (McClintock, 1910).

The large starchy roots were crushed, the fibrous material was removed, and the remainder was used as food (Blankinship, 1905). The large leaves were used in camas-cooking.

Fig. 85. Balsamroot, *Balsamorhiza sagittata*.

Chrysothamnus nauseosus (Rabbit-brush)

Blackfoot: Blue stick grass (Ewers, 1955).

The species was considered to be good fall and winter forage for horses.

Cirsium hookerianum (White Thistle)

The roots were eaten raw or cooked with meat (Blankinship, 1905). This appears to be the species called *Tsin-ah* by the Snake Indian.

Echinacea angustifolia (Purple Coneflower)

The roots of this plant were called 'toothache medicine' by the Indians of eastern Montana. The chewing of a piece of root causes numbness of the mouth very similar to the deadening caused by novocain.

Erigeron canadensis (Horseweed)

Erigeron philadelphicus (Fleabane, Wild Daisy)

Plants contain a variety of drugs valuable in cases of chronic diarrhea or childbirth hemorrhage (Dayton, 1937).

Grindelia squarrosa (Gumweed)

Blackfoot: *Aks-peis* (sticky weed) (McClintock, 1910); *oaks-pe-kow* (it is sticky) (Lanning, 1882).

The leaves and flowering tops contain a resin which is used in the treatment of bronchitis and asthma, as an expectorant, and as an antispasmodic. The plant was used as an antisyphilitic in decoction or made into a tea and taken for kidney troubles. The upper parts of the plant, especially the sticky buds, were used as a cough medicine (Murphy, 1959). A decoction of the boiled root was taken internally for liver trouble.

Gutierrezia sarothrae (Broomweed)

Blackfoot: *Opet-at-sapia* (McClintock, 1910).

The roots were placed in boiling water and the patient made to inhale the steam for respiratory ailments.

Helenium autumnale (Sneezeweed)

The blossoms were crushed and used as an inhalant for hay fever (Murphy, 1959).

Helianthus annus var. *lenticularis* (Common Annual Sunflower)

The seeds were eaten raw. An oil was extracted from the seeds and was used to lubricate the face or body or as a hairdressing (Blankinship, 1905).

Helianthus maximilianii (Wild Artichoke, Narrow-leaved Sunflower)

The tubers were dug and eaten by the Indians of eastern Montana (Blankinship, 1905). This is the species called *esquebois* by Henry (Coues, 1897), the latter a variant spelling of the Cree *askipwaw*. According to a Metis informant, the root is edible in the spring or fall, but rotten in the summer. Henry said that "...when boiled the root is tolerably good eating. They are also eaten raw, but are then of a windy nature, and sometimes cause a severe colic. I have known people to suffer much after eating a moderate quantity." The roots of tuberous *Helianthus* spp. contain inulin, a non-sugar that is not metabolized by the body and, if injected intravenously, is excreted by the kidneys in a short time. That is probably why Henry reported a severe colic after eating the roots of this species (Kaldy *et al.* 1980). The name *esquebois* or its variants probably were applied to any species of *Helianthus* with a root similar to *H. maximilianii*, for example, *H. tuberosus* and *H. nuttallii*, all wild sunflowers.

Fig. 86. Wild artichoke, *Helianthus maximilianii*

Fig. 87. Blazing-star, *Liatris punctata*.

Liatris punctata (Blazing-star)

Blackfoot: *Mais-to-nita* (crow root) (McClintock, 1910).

The species was called 'crow-root' because the Indians believed that the root was eaten in autumn by the crows and ravens. (The root is greyish-black in cross section.) The root was boiled and applied to swellings. A tea made from it was taken for stomach aches. Roots were sometimes eaten raw. The Cheyenne called the species *mok'-ta-wi-si'-i-otst*, 'black medicine weed'.

Lygodesmia juncea (Skeleton-weed, Prairie Pink)

An infusion of the stems was used to treat sore eyes. A tea made from the foliage was given to nursing mothers to increase a scanty flow of milk. The juice that exuded from broken stems was permitted to harden, then gathered and chewed for its flavor (Gilmore, 1919).

Madia glomerata (Tarweed)

The dried herbage was burned for incense (Blankinship, 1905).

Matricaria matricarioides (Pineapple-weed)

Blackfoot: *Mat-o-at-sim* (perfumed plant) (McClintock, 1910).

The blossoms were dried and used as perfume (Blankinship, 1905) and as an insect repellant (Stubbs, 1966). A decoction of the plant, including the flowers, was used in the treatment of diarrhea.

Ratibida columnifera (Prairie Coneflower)

A yellow or orange dye was obtained from the roots (Murphy, 1959).

Townsendia sericea (Low Townsendia)

The roots were boiled, and the liquid was given to tired horses to relieve them (Ewers, 1955).

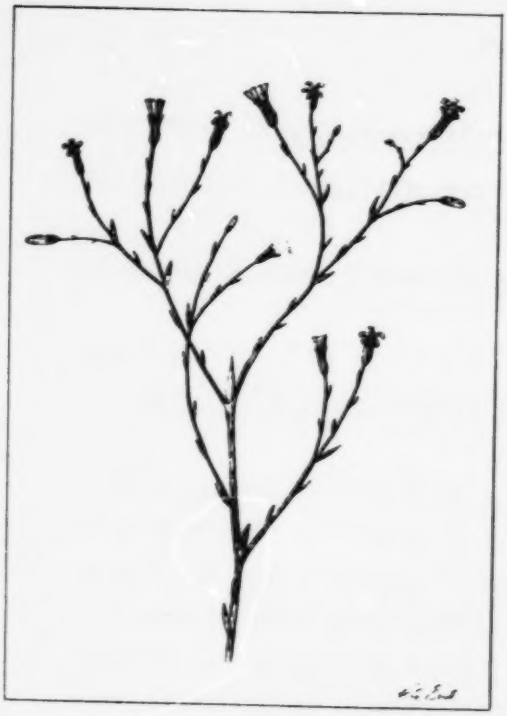


Fig. 88. Skeleton-weed, *Lygodesmia juncea.*

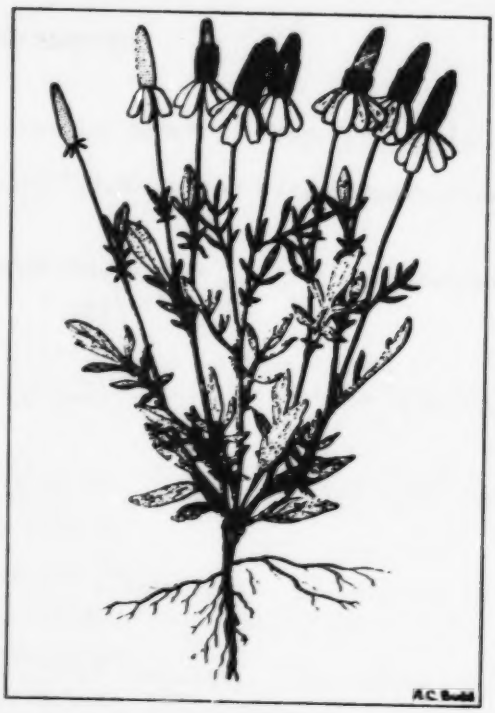


Fig. 89. Prairie coneflower, *Ratibida columnifera.*

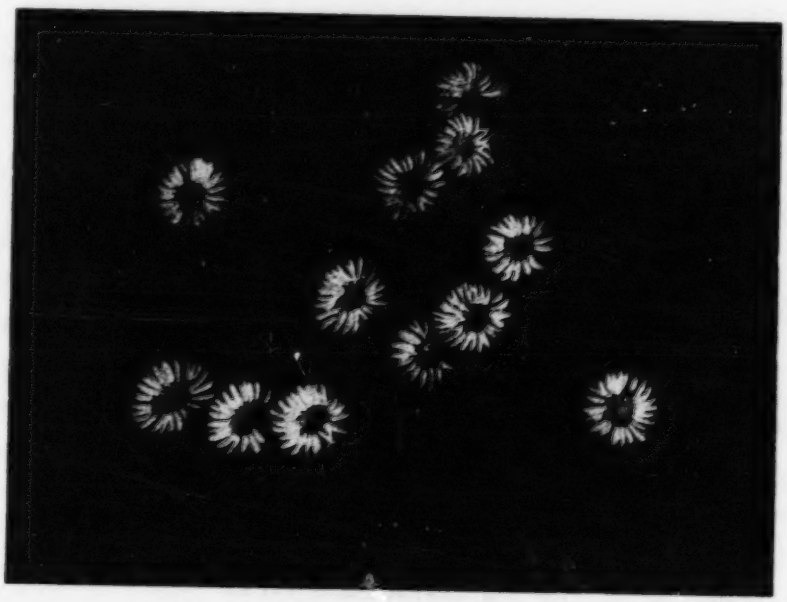


Fig. 90. Low townsendia, *Townsendia sericea.*

UNKNOWN SPECIES

Blackfoot name	English equivalent
Aisaitsikaytakuyi	Rattle-sound-roots (Uhlenbeck, 1911).
Apaksipistaykan	White tobacco (Uhlenbeck and van Gulik, 1930).
Ksis-is'ku	Thorn bush (a generic term) (Tims, 1889).
Mamyo-kaki-kin	Pieces of root were used in the treatment of sore throat or headache. The root was chewed and the saliva swallowed for a sore throat. Also, the saliva was spit into the hand and the throat was massaged. Pulverized pieces of root were sprinkled on hot wood coals and the smoke was inhaled for headache. The root grew in sloughs and was probably obtained from the Cree (Cat Face, 1963).
Pakhtok'sko	Fir (Tims, 1889) (translated by David Melting Tallow (1970) as 'Forest').
Paysi or *paysiiks*	Sweet-root. Apparently a very sweet-tasting root, possibly a *Hedysarum* species, sometimes called sweet broom or sweet vetch, that was eaten to relieve an upset stomach. The plant grows on hillsides in the southern part of the region, reaching a height of 6 inches (Uhlenbeck, 1911).
Paytsikakaytanai	False-roots. Similar to the above. (Uhlenbeck and van Gulik, 1930).

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